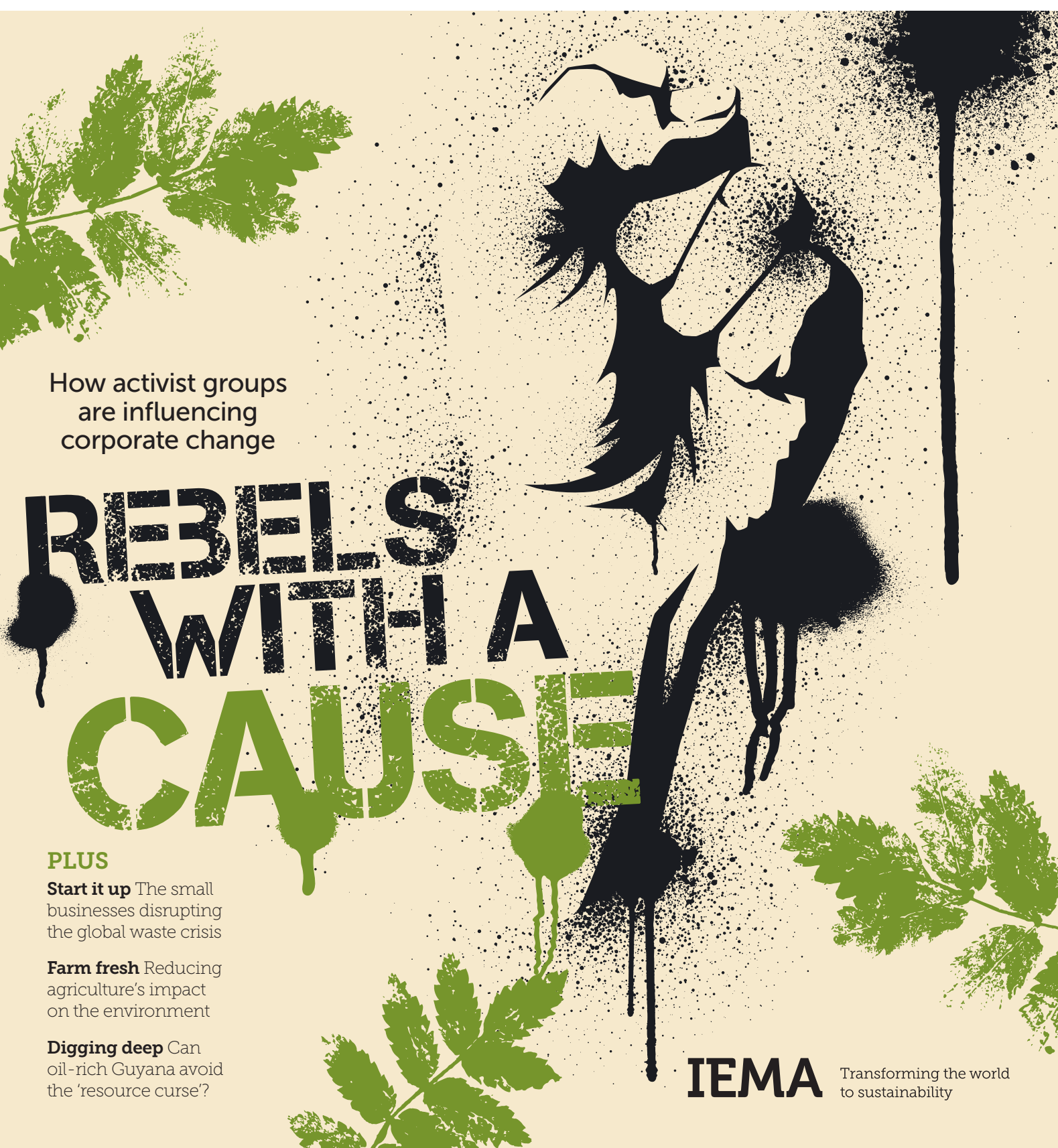


TRANSFORM

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Economy ●
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FOR ENVIRONMENT AND SUSTAINABILITY PROFESSIONALS

October 2018
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oil-rich Guyana avoid
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Kimberley Lasi, Environment Officer | IEMA Diploma

At EEF, we don't just deliver training we are setting the benchmark and are the only provider for the **IEMA Diploma in Sustainable Business Practice**.

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TIM BALCON, CEO OF IEMA

Bold ambitions, exciting plans

Last month we held our 2018 AGM. As well as approving the previous year's accounts and voting in new Board members, those who attended heard about the huge strides we are making, and how we are powering up to build on our successes.

I told the gathered members about the upswing in member engagement in events and webinars, the large numbers of members coming to us via IEMA approved training and the new scale of influence we now boast in policy decision-making. Monitoring and reporting that kind of activity is vitally important to the running of any business, and especially one like IEMA, which has bold ambitions. It also shows that, as we are working through the process of becoming a Chartered body, we're in the strongest position we've ever known. But what next? How will we build on all of this, and, more importantly, what does it mean for you?

As I outlined at the AGM, our aim is to grow IEMA. Why? Because our profession will make more of an impact when its mass increases – the strength in numbers approach. It's not about commercial growth; it's about impact and profile, because as our numbers grow, our voice will be louder, our work more visible and our influence more powerful.

How will we achieve this growth and profile? By enhancing and improving the value of your membership, ensuring IEMA remains pertinent, applicable and attractive – something any environment and sustainability professional cannot get by without. We will continue on our path to Chartership, introduce a new platform to record your professional development so your learning has new relevance, create new training and development opportunities, focus on international development, launch member recognition schemes and awards, accelerate our strong media profile, seek out exciting partnerships and projects and open up influential new networks. The details of this will be designed with you – the IEMA member – at heart.

We will let you know more about our plans and what they mean for you over the coming months. It's exciting stuff, and I can't wait to talk more about it with you. I hope that, as and when each development opens up, you'll continue to get involved and maximise every opportunity for yourself and your career. After all, when you win, the environment wins – and that's our one common goal.



IEMA Transforming the world to sustainability

IEMA is the worldwide alliance of environment and sustainability professionals, working to make our businesses and organisations future-proof. Belonging gives us the knowledge, connections and authority to lead collective change, with IEMA's global sustainability standards as our benchmark. By mobilising our expertise, we will continue to challenge norms, drive new kinds of enterprise and make measurable progress towards our bold vision: transforming the world to sustainability.

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Warners Midlands PLC, Lincolnshire

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tel: +44 (0) 20 7880 6200
www.redactive.co.uk



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ISSN 14727625



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ROUNDUP

ENVIRONMENT &
SUSTAINABILITY
NEWS AND VIEWS

DIVERSITY

Gender diversity creates greener companies and parliaments

Companies with gender-balanced boards are far less likely to be sued for breaching environmental laws, while parliaments with greater female representation are more inclined to be tough on climate change. That is according to the findings of two recent studies, which suggest women, who are disproportionately impacted by the effects of global warming, could play a more central role in tackling the problem than previously thought.

Research by the University of Adelaide found that average environmental lawsuit exposure reduces by 1.5% for each female added to a company's board, typically saving businesses around \$3.1m in each case. A separate report from the Global Commission on the Economy and Climate (GCEC) shows that parliaments with a greater number of women are more likely to designate protected land and ratify environmental treaties.

The University of Adelaide's Dr Chelsea Liu said gender socialisation and ethics theories could offer explanations, which suggest girls are generally brought up to be more caring towards others than boys.

"This can enhance environmental decision-making," she continued. "Previous research also found that female executives are less overconfident and more willing to seek expert advice than their male counterparts."

The findings add further weight to

calls for mandatory gender quotas on corporate boards, with representation currently skewed at around 85% to 15% in favour of men worldwide, according to research by accountancy firm Deloitte. A survey of sustainability professionals by IEMA found earlier this year that men hold 77% of leadership roles among its practitioner members.

This is despite consultancy firm McKinsey & Company finding that businesses in the top quartile for gender diversity on boards are 21% more likely to have above-average profitability than firms in the bottom quartile.

Moreover, the International Trade Union Confederation forecasts that full participation by women in the global economy could boost GDP by as much as \$28trn every year by 2025.

"Empowering women in leadership is critical for the environment and the global economy," the GCEC said. "Women are uniquely well situated to identify, champion and help deliver sustainable solutions."



PHOTOGRAPHY: ALAMY



BUSINESSWATCH



Virgin Atlantic to trial recycled jet fuel

Virgin Atlantic will use a groundbreaking jet fuel made from recycled waste gases to power one of its Orlando to London flights later this month.

The airline estimates that the low-carbon energy source could cut emissions by 70% and provide one-fifth of all aviation fuel.

Sir Richard Branson called it "an exciting breakthrough in our joint fight against climate change."

▶ bit.ly/2OveCW9



Burberry to stop destroying unsold products

Luxury fashion

company Burberry has announced that it will immediately end the controversial practice of destroying unsold products, after public criticism.

The firm said it would instead expand efforts to reuse, repair, donate and recycle goods under its five-year responsibility agenda, and would also stop using real fur in its products.

"Modern luxury means being socially and environmentally responsible," Burberry CEO, Marco Gobbetti, said.

▶ bit.ly/2OysLl1



Carlsberg launches new 'snap pack' packaging

Brewing company Carlsberg has

unveiled new packaging that holds beer cans together with glue in a 'world first' for the industry that will drastically cut its plastic use.

The 'snap pack' cans will reduce the amount of plastic in multipacks by up to 76%, equivalent to 137kg every hour and 1,200 tonnes a year.

Special inks to improve recyclability have also been introduced; Carlsberg says the move gives consumers the choice of "probably the best beer in the world, and one that is also better for the environment."

▶ bit.ly/2NfzWT3

CORPORATE RESPONSIBILITY

Companies 'cherry-picking' sustainable reporting standards

A "huge variation" in sustainable reporting standards worldwide has rendered meaningful comparisons "impossible" according to an international study, which warns that companies may be cherry-picking measures that make them look good.

Analysis of almost 800 firms by researchers at the University of Auckland found that none use all of the 91 sustainability indicators published by the Global Reporting Initiative (GRI).

The companies studied had instead chosen to report between one and 40 of the standards, with reducing greenhouse

gas emissions one of the indicators most commonly overlooked.

Oceania and Africa reported the lowest regional average of just 20 measures, with the researchers warning that firms are choosing standards that are least difficult to report, or easiest to turn into positive messages.

They are now calling for minimum sustainability reporting requirements, similar to those used in financial reporting, which provide an accurate and comparable picture of how companies perform across the sustainability spectrum.

RESOURCES

Circular economy and bio-economy must work in tandem – EEA report

Incorporating circular economy principles into the bioeconomy will be needed to ensure rising demand for food and bioenergy does not worsen over-exploitation of natural resources.

That is according to a new report from the European Environment Agency (EEA), highlighting how the EU is treating these two concepts separately, when they would benefit from stronger links.

This would be particularly true around product

and infrastructure design, with collaboration in the value chain ensuring that converting resources into bio-based products is done sustainably.

The report also highlights how consumers can help by eating less animal-based protein, and preventing food waste and biowaste.

"A circular, bio-economy approach can help retain material value and functionality for longer time, as well as avoid unrecycled biowaste," the EEA said.





IEMA Sustainable Construction Conference

During UK Construction Week
10th October, NEC, Birmingham

Be inspired by industry experts from organisations including WSP, Skanska, Willmott Dixon Holdings, Balfour Beatty and Interserve during one essential day and take the opportunity to network and connect with like-minded professionals throughout the conference.

Session 1 - Low Impact Construction

Tackling critical issues including materials and waste in construction, low carbon and electricity on construction sites.

Session 2 – Net Gain in Construction

Exploring how to move from low impact to net gain, including implementing biodiversity net gain along the way, and exploring wider environmental gains.

Register to attend today:

www.ukconstructionweek.com/news/show-news/1630-iemaconference

Start your journey with IEMA today and benefit from an exclusive **15% off your Affiliate membership** when you access iema.net/join and use code: **UKCW2018**.



LEADERSHIP

New directors appointed at 2018 AGM

The 18th IEMA Annual General Meeting was held on 12 September, with members confirming the appointment of three new Non-Executive Directors to the IEMA Board.

As well as approving the 2017 accounts and Directors' report, members in attendance at the Good Hotel in London voted in the three new Board members: Louise Nicholls, Safia Iman and Richard Carter.



LOUISE NICHOLLS

Corporate head of human rights, food sustainability and packaging at M&S

Louise Nicholls is part of M&S's Food Technology Leadership Team, where she leads a fantastic group of food sustainability and packaging experts, supporting buying teams and the supply chain on a day-to-day basis.

She was instrumental in developing Sedex – one of the world's largest organisations for helping companies manage responsible sourcing in their supply chains.

Nicholls has also held board positions at the Ethical Trading Initiative, the LOCOG Stakeholder oversight board and the Equality and Human Rights Commission Advisory Panel.

In addition to her current position on the IEMA Board, she is also a trustee of The Bread and Butter Thing.



SAFIA IMAN

Founder of Global Conscious Movement International

Safia Iman has worked on senior executive teams, including working as director of transformation, and has an interest in transformative change. She trained and practised as a barrister for around 10 years, and is currently an honorary door tenant at 23 Essex Street Chambers.

Iman is also the founder of GCM, a global advisory group working to increase conscious capability and excellence in organisations and society. Working with those seeking a deeper understanding around social impact, connectivity, purpose and those committed to transformative organisational change, GCM also promotes awareness and seeks to improve conscious capability through collaboration, dialogue and uniquely curated events.



RICHARD CARTER FIEMA

Head of finance and sustainability at Adnams

Richard Carter is a qualified chartered management accountant, and held a series of commercial finance and controller roles at BT before joining Adnams, an award-winning brewery and distillery based in Southwold, Suffolk.

In his current role, Carter demonstrates the clear and compelling business case for environmental sustainability and frequently provides guest lectures for universities including Oxford, Imperial and UEA.

In addition to his position on the IEMA Board, he sits on the board for Ashden and The National Trust's Fit for the Future network, the ICAEW sustainability committee and the board for Cleantech East.

Chair of the IEMA Board Diana Montgomery welcomed the new Directors, saying:

"As we work towards becoming a Chartered body, this is a really exciting point in IEMA's history. Having such a bold and ambitious goal to transform the world to sustainability means we must be responsive as well as brave, which is why we constantly seek to work with exciting organisations and the brightest minds. Our three new non-executive directors firmly fall into that last category, and I'd like to welcome Louise, Safia and Richard to the IEMA Board. Through their collective and individual knowledge, enthusiasm and ambition they will help take IEMA to the next level. I look forward to working closely with them, right away."

➡ To find out more about the IEMA Board, go to bit.ly/2Q3mazZ

PROFESSIONALISM

3,000 members say #IClickedTheCode

More than 20% of all IEMA members renewed their commitment to the new IEMA Code of Professional Conduct during September.

Members made their commitment during a full month of discussion around the issue of professional conduct and ethics, which included blogs, online debates and a special webinar. As this issue of TRANSFORM went to press, the #IClickedTheCode hashtag – used by members to show their employers, colleagues and clients their commitment to high standards of professional practice – was used more than 100 times across LinkedIn, Twitter and Facebook.

Abiding by the IEMA Code of Professional Conduct is a mandatory requirement of membership for all grades. You can make your declaration at any time, but why not do it now?

Signing up takes less than two minutes – just go to iema.net, log in to MyIEMA and follow the instructions that appear at the top of your screen. You can then download your social media cards to show your network your high professional standards, and say #IClickedTheCode.

👉 If you have any questions about the new Code, get in touch any time at info@iema.net.

IEMA GUIDE

Download your new *Sustainability in Practice* guide



Sustainability in Practice: Managing Compliance with Environmental and Human Rights Law in Organisations was launched on 27 September. Given requirements around environmental and human rights protection, compliance can be a challenge – so IEMA commissioned the guide as an update to 2005's *Managing Compliance with Environmental Law Practitioner*.

The new guide was written by Colleen Theron FIEMA, director of Ardea International, and was developed with the involvement of more than 100 IEMA members and other leading professionals. It outlines the legal and moral duties that organisations must comply with, and gives clear guidance on the considerations of business growth, innovation and value creation without degrading the environment or harming society.

"The consequences of non-compliance in organisations are multifaceted and can be significant," said Martin Baxter, IEMA's chief policy advisor. "This guide has therefore been developed to help environment and sustainability professionals put management processes in place that will help ensure compliance."

Theron explained why the guide has widened its scope: "While the guide still focuses on the relevance of having a management system in place, incorporating human rights legislation and social issues into the management approach is critical as the trend towards reporting on both environmental and human rights is not decreasing."

The guide is free to download to IEMA members. It can also be purchased in hard copy from the members' shop – £15 for members or £25 for non-members. Go to iema.net to download or buy today.

CONSULTATION

What will a new UK environment act look like?

With less than six months to go before the UK exits the EU, IEMA – as part of the Broadway Initiative – is seeking your views on the Blueprint for an Environment Act.

The Broadway Initiative exists to pursue the most effective ways of governing the environment in the interest of society as a whole. It brings together a cross section of stakeholders and recognised experts to generate ideas and proposals for arrangements to govern the environment post-Brexit. The purpose is to advise governments on how to enable all parts of society to play their part in achieving long-term societal



objectives. IEMA is acting as incubating organisation for the initiative.

Broadway is currently working on an initial blueprint for an Environment Act, and wants you to check and test the plan's aims and ambitions. Go to iema.net/broadway to download a copy of the Blueprint and use the accompanying template to give your feedback before 31 October.

NEW REGULATIONS

THE LATEST

■ GUIDANCE ■ CONSULTATIONS ■ LEGISLATION



9 JULY 2018

Energy efficiency

Directive 2018/844/EU amends the directives on the energy performance of buildings and energy efficiency, in order to make significant efficiency gains in the EU building sector. It must be implemented into national law by 10 March 2020.

➔ cedr.ec/5g2



1 SEPTEMBER 2018

Pollution prevention and control

The Environmental Authorisations (Scotland) Regulations 2018 begin the basis for an integrated framework of environmental authorisations by establishing a system for radioactive substances activities. Those carrying out such activities must obtain an authorisation to do so.

➔ cedr.ec/5ge



1 SEPTEMBER 2018

Energy efficiency

Halogen lightbulbs have now been banned under Regulation (EC) 244/2009, on ecodesign requirements for non-directional household lamps. Remaining stocks can still be sold, but the switchover to light-emitting diodes (LEDs) is now under way.

➔ cedr.ec/5gc



17 SEPTEMBER 2018

General

The Environment, Food and Rural Affairs (Miscellaneous Amendments and Revocations) Regulations 2018 make various amendments to deal with out-of-date references to domestic and EU legislation, including hazardous waste, environmental information and pesticides.

➔ cedr.ec/5g5



27 JULY 2018

Air quality

The Department for Environment, Food and Rural Affairs has published the Code of Good Agricultural Practice for reducing ammonia emissions from farms in England. It explains the practical steps farmers, growers, land managers, advisors and contractors can take to reduce such emissions and improve air quality.

➔ cedr.ec/5g3



31 AUGUST 2018

Climate change

The Environment Agency has issued a series of guidance updates for those involved in climate change umbrella agreements. These are legal documents for the various sector associations which outline their obligations in the Climate Change Agreements scheme.

➔ cedr.ec/5ga



23 JULY 2018

Waste

The European Commission is seeking views on options to address the interface between chemical, product and waste legislation. It gives options to address the links between different areas of legislation, and combat the problem of substances of concern in products and waste.

➔ cedr.ec/5g4



29 AUGUST 2018

Air quality

The Department for Agriculture, Environment and Rural Affairs is consulting on proposed amendments to the Fluorinated Greenhouse Gases Regulations (Northern Ireland) 2015, which aim to bring Northern Ireland in line with EU requirements, help control its greenhouse gas emissions and limit global warming.

➔ cedr.ec/5g9

INCOURT

POLLUTION

Dyehouse fined for operating without environmental permit

The operators of an illegal textile dyehouse, based in a residential area of Leicester, have been fined almost £60,000 in fines and costs.

Euro Dyers Ltd pleaded guilty at Leicester Magistrates' Court on 25 July 2018 to two charges of operating without an environmental permit and was ordered to pay a fine of £40,000, costs of £19,084 and a £175 victim surcharge.

The company operated from Saffron Works, Saffron Lane, and had been told on numerous occasions that it required an environmental permit. It had been warned several times by the Environment Agency, which even tried to help it with the application. However, a permit was never successfully applied for.

Magistrates heard that such a permit would have introduced conditions to manage odour, regulate emissions to air and sewer, the generation of waste, noise pollution and the prevention of accidents. Specifically, the latter would have been important as Agency inspections found flammable liquids stored on

top of oxidising chemicals and chemicals stored with no method of containment to control leaks. Wastewater was also discovered leaking into a roadside drain outside.

An investigating Environment Agency officer commented: "Despite several attempts to assist the company, and after numerous warnings, this company still refused to be brought into the permitting regime. We hope that this fine will serve as a warning to them and others in the industry that there are strong penalties if they flout the law.

"This is great news to the residents who live nearby, the environment and to competitors who do the right thing and comply with the law."

The Environment Agency has also recommended that dyehouse operators across England who do not currently hold an environmental permit should proactively assess the capacity of their sites to check whether they need one. Any above the threshold of 10 tonnes per day should contact the Agency for advice and guidance on how to apply.

CASE LAW

Application for review on end-of-waste status dismissed

The case of *R. (on the application of Protreat Ltd) v Environment Agency*, an application for judicial review, has been refused.

Protreat, the claimant, sought judicial review of the Environment Agency's decision to regard base oils generated from re-refined waste lubricating oil as 'waste'. Protreat dealt with companies that refined and reprocessed waste lubricating oil, providing a consultancy service.

Refining and reprocessing could mean the end-product had end-of-waste status, in which case it would not be regarded as waste and would not have to meet waste regulations. A criteria for 'end-of-waste' status

can be found in Directive 2008/98/EC on waste, but that directive says: "Member states may decide case by case whether certain waste has ceased to be waste taking into account the applicable case law".

The key discussion was whether the Environment Agency had an obligation to provide binding guidance upon the issue of when waste lubricating oil has achieved end-of-waste status following re-refining or reprocessing.

Commenting on Directive 2008/98/EC, Sir Wyn Williams said that articles in it did "not support the contention that the directive imposes upon member states

a specific obligation to provide end-of-waste guidance whether in relation to the products of re-refining or the products of any other process of conversion of waste".

The main aim of Directive 2008/98/EC is to protect the environment and human health by preventing or reducing the adverse impacts of waste generation and management, and by reducing overall impacts of resource use and improving the efficiency of such use. Member states must aim to achieve that, but the way in which they do it is down to each member state.

The application for judicial review was dismissed.

◀ Euro Dyers had been told several times that it required a permit

OTHER NEWS

Drought plans to continue into November

The National Drought Group has stressed the need to use water wisely, following the pressures placed on water resources and the environment during this summer's heatwave.

England has suffered the driest May to July since 1921, and the Environment Agency has responded to a 330% increase in drought-related incidents, with its teams deployed to protect wildlife and rescue fish struggling due to low river flows.

The Met Office three-month outlook for September to November forecasts likely above average temperatures and slightly lower than average rainfall. As a result, the Environment Agency has taken a variety of measures, including:

- Supporting farmers by allowing more flexibility with water abstraction
- Operating water transfers to help maintain river flows
- Making sure businesses abstracting water are not taking more than they need
- Issuing drought permits to United Utilities at locations in Cumbria, should they be needed later in the year
- Not cleaning fleet vehicles and office windows to avoid unnecessary water usage.

Sir James Bevan, chief executive of the Environment Agency, said: "Despite the recent rain, we will need to continue to collaborate closely as we move into autumn. All of us have a role to play in helping to protect the environment and maintain supplies. We encourage everyone to use water wisely."



When most people think of slavery, they envisage a bygone era in which victims were forced to travel thousands of miles in chains, often working on the US plantations of

Alabama or Mississippi. What is less known is that there are an estimated 40.3 million people living in servitude today – 136,000 of them in the UK.

These victims are hidden from view and could be someone you see regularly in the street or sit next to on a bus or train. You might also find them in the supply chains of your local supermarket, with many people unaware they could be buying items produced by someone working against their will.

With almost 20 years' experience as a civil servant, Paul Gerrard, now the Co-op's policy and campaigns director, was busy working for the coalition government when it produced its groundbreaking Modern Slavery Act in 2015, requiring all large businesses to produce a statement outlining how they are tackling the issue. He explains how the Co-op, one of the UK's largest and most historic food brands, is attempting to eradicate modern slavery and human trafficking from its supply chains.

Same problem, different century

"We have forced labour, as well as sexual exploitation and domestic servitude, which involves people being kept as slaves in private homes," Gerrard says when describing slavery in Britain today. "But our research shows that around 40% of people in the country have no idea what modern slavery is – they think it is something from a long time ago, or in a place far away from here."

Another common misconception, he believes, is that the issue is immigration-related; in fact, the most common nationality among the 5,000 people rescued from slavery in the UK last year was British. "Although this is different from the trans-Atlantic slave trade in the 1800s, it is still about control," he says. "It is no longer about shackles and chains, but these criminals still own you by taking your passport, keeping you in a place you don't want to be, holding a debt against you and threatening your family. It is done differently today, but control is still at the heart of it."

Susceptible supply chains

When it comes to supply chains, Gerrard explains that one of the most typical examples of modern slavery involves debt bondage, when victims work for someone they are in debt to. "For food retailing, this will most likely occur in production," he says. "The reality is that if you are a business with any scale, and

Time to walk free

The Co-op's policy and campaigns director, **Paul Gerrard FIEMA**, talks to Chris Seekings about rooting out modern slavery and human trafficking from supply chains

you look properly in your supply chain, you will find an issue." One of the biggest challenges, says Gerrard, is that many CEOs refuse to admit their business has a problem; another is the level of trust that retailers have with suppliers, and the amount of transparency companies include in their modern slavery reports.

Around 75% of the Co-op's food suppliers have been working for the business for five years or more, with many having done so for decades – making it easier for the firm to stamp out the problem. "If you have got your board saying, 'we have an issue here', and you are working closely with your suppliers, that will drive you to constantly look again at how you tackle risks," Gerrard says. "So it's about transparency, a close relationship with your suppliers and senior recognition that there is an issue to tackle."

However, there also appears to be a lack of recognition in government, with its official data on modern slavery being drastically different from the data of human rights organisations. The Walk Free Foundation estimates there are 136,000 victims in Britain today, while the government puts the number closer to 10,000. "I think that is a vast underestimate and if you speak to any charity, the 136,000 figure is much more plausible," Gerrard says. "When you are trying to measure illicit activity, operational data will be sparse – but because awareness has become greater, the data has got stronger."

Taking firms to task

Despite legislation being introduced almost three years ago to ensure firms with turnover of £36bn or more report on modern slavery, there are not actually any financial or criminal penalties for non-compliance. Remarkably, Gerrard says, 40% of the government's own suppliers are not following the rules, and none have ever been threatened with an injunction to stop trading. "They could at least name and shame companies that fail to comply, but they are not even doing that," he says. "I have never seen anything like it in all my life – there are significant penalties with General Data Protection Regulation, and companies are shamed for gender pay gap reporting, so why not here?"

Gerrard says the government should be proud that the UK was the first country to introduce a Modern Slavery Act, but has since been so busy taking the plaudits that it has "literally done nothing to enforce it". He believes ministers think it should be down to customers to drive change, but this is not happening because it is too difficult for the public to know who is tackling the issue and who isn't.

The Co-op is one of 40 businesses that wrote to the prime minister, asking the government to



"The reality is that if you are a business with any scale, and you look properly in your supply chain, you will find an issue"

Interview

produce an online registry that would allow customers to see which companies have produced a statement on modern slavery. "You must name and shame them," he says. "Half of businesses have not complied with the rules and there is no consequence. When you get into a system where it is easier and cheaper to be non-compliant than compliant, you are in a really bad place."

Harsh reality

Gerrard goes on to outline the grim reality facing victims of modern slavery, recalling one incident involving an individual held in debt bondage by a gangmaster in a supply chain of one of the Co-op's suppliers.

This person had let slip at a Christmas party that his wages had been going straight to a criminal who was holding him against his will, and that the only reason he was at the party was because it would have looked peculiar if he wasn't there. "Our first reaction was, is this individual now safe? Once we knew the answer was yes, we then considered what to do about it," Gerrard explains. "A company's first response shouldn't be, as it often is, 'What is the risk to our business?'"

The most harrowing story he recounts involves a woman from the Indian subcontinent who had been a slave for 36 years before being rescued in England; she had been enslaved at the age of six, and then sold as property six times. "The only reason she was rescued was because the money she had used to buy food for the family she was a slave to was counterfeit, and she got caught by the police."

Bright future

The lady in this particular case ended up being one of the lucky ones – the detection rate for modern slavery in the UK is estimated to be around 4%. She was enrolled into the Co-op's Bright Future programme, which offers victims the opportunity of a paid work placement, and a job at its food business if they are capable. "What that did for her was give her back a sense of dignity, and a sense of 'I am in control of my destiny, I can make my own money and make my own choices in life,'" Gerrard says.

Approximately 40% of people rescued from modern slavery, however, are thought to return to their enslavers. Part of the problem, Gerrard

▶ Paul Gerrard has made it his mission to eradicate modern slavery from the Co-op's supply chain



"When you get into a system where it is easier and cheaper to be non-compliant, you are in a really bad place"

explains, is that the government only offers 45 days' support, after which victims have a limited number of options. The Co-op has since written to the Home Affairs Select Committee's inquiry into modern slavery, arguing that legal requirements for large firms be tightened and extended to public bodies. Gerrard also hopes the Bright Future programme, which is already supported by 15 businesses, becomes a core part of the government's support for survivors, offering a range of employment opportunities. "We can offer all sorts of jobs – in a shop, store logistics factory, or head office – but some don't want that," he says. "They might want to work in catering, or production, so we are asking more companies to join us. We want Bright Futures to be a set of businesses that help provide victims with jobs right across the country."

The Co-op has been tackling modern slavery since it was founded in 1844, but there are many others taking the lead, like John Lewis, M&S and the Carphone Warehouse. "Ultimately, this is an issue for businesses to take seriously," Gerrard says. "They are the ones that can help identify victims and give them their lives back." 🗨️



MODERN SLAVERY

A shockingly widespread problem

40.3m

people live in servitude, globally

5,000

people were rescued from slavery in the UK last year

136,000

people are slaves in Britain today, according to the Walk Free Foundation

10,000

The government's estimate of how many slaves there are in Britain today

40%

of the government's own suppliers are not following the rules on modern slavery reporting

40%

of those rescued from modern slavery are thought to return to their enslavers



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Words can come back to haunt politicians, particularly when rhetoric clashes with reality. The

UK's environment secretary and prime minister are a case in point with their 25-year plan for the environment.

Michael Gove and Theresa May promised a "world-leading" environmental watchdog to protect the environment post-Brexit. Key will be its role in supporting the longer-term government aim to "be the first generation to leave the environment in a better state than when we inherited it".

It sounded wonderful – but then the government launched a consultation document on its vision for that watchdog while confirming plans to publish an Environmental Principles and Governance Bill this autumn. Cue a succession of canine metaphors denouncing the plans: from former cabinet ministers of various parties, from sustainability professionals and green campaigners. The watchdog would be "more poodle than Rottweiler", they said; "less Hound of the Baskervilles and more Muttley out of the *Wacky Races*". Lord Deben, who as environment secretary in John Major's government knew a thing or two about Whitehall's relationships with government agencies, pointed out the crux of the matter: "The consultation paper has been written by two hands," the chair of the Committee on Climate Change argues. "It is written by the hand that says: 'We really must have an independent watchdog. We must stand up and say the environment comes first and we have to pass it on'. The other hand says: 'Ah, but ministers must always be in charge and we must balance this promise with all sorts of other things'."

The government's narrative within the consultation encapsulates the "all sorts of other things" that critics fear. It pushes the idea of a trade-off between the economy and the environment, with a



In the doghouse

The ministerial rhetoric behind the government's post-Brexit environmental watchdog is impressive, but will it have any power? **Huw Morris** reports

"proportionate approach" leading to better economic outcomes at the expense of environmental ones.

IEMA brands this thinking "outdated, unfounded and unhelpful". The Aldersgate Group's executive director Nick Molho says it shows the limitations of the government's concept of environmental governance and betrays the myth that regulations are bad for growth – a myth that stands in the way of good environmental policymaking.

A work in progress

A glance at the consultation reveals that the government's vision for the watchdog is a work in progress, setting out minimal firm proposals and then asking questions on how it should work. Since the consultation was published, the House of Commons has passed an amendment to the European Union (Withdrawal) Bill requiring the new agency to have the power to take proportionate enforcement action – including legal proceedings.

Everyone agrees that the UK leaving the EU will create an environmental governance gap, but major questions still hang over how to plug that gap. Many fear that, without tough penalties, authority, ambition and resources, the watchdog would struggle to enforce environmental law – leading to 'zombie' legislation, which sits on the statute book but is widely ignored.

What clout will the body have? ClientEarth law and policy expert Tom West says that, while there is scope for the government to strengthen the proposal, its vision for a green watchdog is "far too weak" and "toothless".

"To be truly effective, a green watchdog must have the power to take all public bodies to court when they fail in their duty to protect people and the planet," he says. "It must be able to properly hold the government to account and engage with people and communities to help them solve their environmental problems."

"The myth that regulations are bad for growth stands in the way of good environmental policymaking"

A second issue concerns the body's authority. This betrays the clash between rhetoric and reality – whether the lofty statements on the environment in the 25-year plan are owned by the whole of government and not just Defra. And how will those goals be measured?

"To what extent should the watchdog take not just central government to court, but also extend its reach into other areas of government and non-departmental bodies?" asks IEMA chief policy advisor Martin Baxter. "As for the advisory powers, what advice will it be giving?"

"We are looking for a framework that would have legally binding goals, with the forthcoming act having the goals set out in the 25-year plan established in law. The framework needs to set targets and metrics for key environmental outcomes, set on a five-yearly basis. The new body should provide advice on what those milestones

should be and whether or not they are being achieved."

Duty of responsibility

Then there is the issue of ambition – not in ministers' rhetoric, but in the need for "horizon-scanning" to spot longer-term environmental challenges early. This, in turn, would fuel a drive for innovation across the public and private sectors –

which is crucial if the UK is to confront future environmental challenges.

"There has to be a connection between the long-term, high-level goals and what they mean for decisions on the ground," says Baxter. "It's very hard trying to regulate everybody without an overarching duty of environmental responsibility, so that government departments and public and private organisations have a basic duty to act responsibly towards the environment, or to take account of the environment in making decisions.

"If you do that, it helps to get people working together on developing the best solutions and doing what we want to do. Then it will be up to the government to fully fund the new independent body and its programmes to get us where we need to be." 

HUW MORRIS
is a freelance
journalist

THE NEW WATCHDOG'S RESPONSIBILITIES

- Providing independent scrutiny and advice on government environmental policy and law
Similar to the Committee on Climate Change's functions
- Responding to government complaints about the government's delivery of environmental law
Comprising powers to afford at least the same opportunities to submit environmental complaints as currently exist
- Holding the government to account over its delivery of environmental law and exercising enforcement powers
Involving powers to issue advisory notices setting out corrective action where needed. Other mechanisms are being considered.

Small business

Small businesses are using innovation and disruption to tackle the global waste crisis. **Katie Burton** talks to four new start-ups in the sector

Gaining a

FOOTHOLD

PHOTOGRAPHY: ISTOCK

For a long time, waste was relatively untouched by the start-up scene. New businesses sought to tackle climate change and pollution, but rubbish was discarded and forgotten.

Now, with plastic vilified and the dangers of landfill and ocean-dumping brought to the fore, entrepreneurs are busy identifying gaps in the recycling market and finding ways to make money from rubbish. Some of these businesses have already shaken up the industry. How have they done it, and what are the ingredients of a successful start-up?

Spot the gaps

"I think that disruptions to the industry come from start-ups, because that's in their DNA. They come up with new solutions," says Jack Ostrowski. He's the creator of a new app, launched in the UK in April, called reGAIN. The app lets individuals send away unwanted clothing in return for discount coupons for a range of goods and services. The clothes are then recycled, reused or upcycled.

Ostrowski came up with the idea off the back of his existing work in the textiles industry. "I knew that 300,000 tonnes of textiles go to landfill every year, so it was a no-brainer," he says. He noticed that, while a few brands were already running take-back schemes, there was a gap. "I thought to myself, hang on, what about all my other customers who are online only – would they like to introduce a take-back programme to their customers?"

So far, the reGAIN app has had 51,000 downloads and has diverted 46,000kg of clothes from landfill, Ostrowski says.

Spot the problems

As Ostrowski and reGAIN demonstrate, good ideas often come from spotting gaps in the market. In other instances, they spring from a feeling that existing methods don't make sense. Charles Yhap is co-founder of CleanRobotics. The company's flagship product, the Trashbot, started life in 2015 when its creators secured a place with a start-up accelerator in Pittsburgh. The Trashbot is a bin that

WASTE NOT

How start-ups are revolutionising the waste management industry

The level of accuracy achieved by CleanRobotics Trashbot in identifying recyclable material – three times better than a human



automatically separates recycling from other waste using artificial intelligence and robotics. It is currently installed at Pittsburgh International Airport.

The idea for the Trashbot sprung from the confusion caused by the range of recycling bins at places such as his local Whole Foods, Yhap says. The incoherent systems presented him and co-founder Tanner Cook with an intriguing dilemma. "We started thinking: there's got to be a better way to do this. We looked at the cost of sensors and the state of recycling in the US and globally and we figured: maybe this is something a robot could do." He says the Trashbot is now 90% accurate in identifying recyclable material – three times better than a human.

"Good ideas often come from spotting gaps in the market"

Like Ostrowski, Yhap thinks it's the right time for new ideas. "It's more important now for the recycling industry to innovate than ever before," he says. "Start-ups are part of that story." He points in particular to China's National Sword policy, enacted in January 2017, which saw vast amounts of formerly exported

recycling rejected for poor quality. The repercussions of the policy are still reverberating through the industry.

Keep it simple

When it comes to that first idea, successful start-ups have something in common – they keep it simple. Michael Allegretti is senior vice president for policy and strategic initiatives at Rubicon Global, a tech company with thousands of customers across the US and 16 other countries, including the UK. It offers a range of waste management services to companies, city governments and local authorities – including what Allegretti describes as the "Shazam of garbage", an app that picks up on audio cues to register when waste enters a rubbish truck.

Yet, as Allegretti explains, when the company was founded in 2008, it focused on one question: can you use technology to confirm to a customer exactly when their garbage will be picked up? The answer was yes. But nobody else was doing it.

Break the status quo

Untouched for so long, the waste management industry can look intimidatingly entrenched to those entering with new ideas. "Within the industry there will always be people protecting and defending the status quo," says Ostrowski.

That's something that relative newcomer Revolution Systems knows all too well. Just five years old, the company has created a smaller, cheaper 'materials recycling facility' – a series of machines that separate recycling into individual material streams. It wants small towns in the US to use the product to manage their own recycling, a new concept in a country where small towns normally transport their waste to big cities.

"We're challenging assumptions," says Patrick Tierney, co-founder of Revolution Systems. "It takes time. Some of the places that we visit, the customers don't believe the numbers because they've been told for years that there was only one way to do it." The team has had to counter local opinion, as well as challenge the hegemony of the US's three largest landfill operators.

More than anything, start-ups in this space need resilience. "We've proved that we are more productive than anything else on the market, and that's inherent in the design," says Tierney. "Now we're trying to sell more – we're pushing hard to do that. Both my partner and I have tapped out our finances, and we're both working second jobs."

Lock down customers

Given these challenges, it's vital for start-ups to find customers who are willing to take a punt. Allegretti explains that this was the key to Rubicon's early success. "Most tech companies operate from the premise that if you build it, they will come. They'll have the best app, the seamless experience, downloads will take off and it will be a thing."

Aware that it was attempting to enter an entrenched, multi-trillion-dollar industry, Rubicon focused instead on securing big accounts, partly by undercutting the incumbent players on price. "There were

"Our low cost means we can iterate a lot faster than the wider industry, which deals in \$100m decisions"

customers that committed to making a greener choice and trying something new. That created a footprint for us nationally at a very fast rate."

In some ways, Ostrowski disagrees with this analysis, believing in the adage: 'Be so good that they just can't ignore you'. "The best ideas will be the ones picked up by the retailers."

Fail fast, fail forward

Initial success is not always a precursor to a lasting business, and start-ups have to keep moving. Luckily, this is something that small businesses are ideally placed to do – part of the reason they can drive innovation. "CleanRobotics doesn't have millions of dollars of investments into assets and capital expenditures, so we can move quickly," says Yhap. "That's what this space needs – a lot of small, agile companies that can adapt quickly to this shifting environment."

It's an idea that is often repeated. Speaking about Revolution System's small-town recycling facilities, Tierney says: "We've been wrong about a lot of stuff. But we've been right more than we've been wrong, and that's part of our progress. Our low cost means we can iterate a lot faster than the wider industry, which deals in \$100m decisions."

Innovate or disrupt?

Entrepreneurs favour different language. For some, pure disruption is the goal. "All innovation does is improve the existing system that's out there," says Ostrowski. "Disruption makes the old way of doing things irrelevant, and I think that's what reGAIN will do."

For others, innovation remains a worthy pursuit. "We want to evolve the industry," says Allegretti. "There's a place in the future industry for everyone. Many of the current players will have a role – they're increasingly starting to understand that times are changing."

Innovative or disruptive, it's clear that start-ups are important when it comes to the waste industry.

As anyone who cares about the environment knows, the old ways just aren't working. 🌱

KATIE BURTON is a production editor and writer



David Fatscher introduces the new international standard for sustainable cities

Raising the standard

Just over four years ago, the United Nations declared that 54% of the global population was now living in urban areas. In May 2018, the UN updated its own forecasts, projecting this proportion to increase to 68% by 2050 – so adding a further 2.5 billion to the urban population, with 90% of this growth taking place in Asia and Africa.

How can those charged with managing and designing cities best respond to the economic, environmental and social impact that these trends place on city users? What can these planners learn from each other? These were the questions that experts from more than 50 countries sought to answer when they convened to develop the new international standard for sustainable cities and communities, now published as BS ISO 37106: 2018.

Citizen-centric cities

At the heart of the standard is the idea that cities are looking to transform the way they operate. The traditional model has been based around functionally-oriented service providers that operate individually, with minimal cross-sector interaction. Budget-setting, accountability, decision-making and delivery have often been independent of one another, and might never be designed to cater for the needs of the user. Given urbanisation trends, future cities clearly need a more strategic approach that drives innovation and collaboration between service providers. This international standard provides guidance on how to make that transition.

A smart city operating model should: be focused on end outcomes; enable cross-

silos; governance; change the way services are delivered to users; and unleash city data for interoperability and integration purposes. This means moving from an inefficient, disjointed, producer-focused model to one that is citizen-centric, digital, agile, open and collaborative.

Through collaborating across different areas and embracing technology, city leaders can deal with future challenges in a cost-effective and sustainable way. In Barcelona, for example, city parks use technology to sense and control irrigation and the water in public fountains. This alone has increased water conservation by 25%, saving around €480,000 (£430,000) annually. Closer to home, Peterborough has saved £5m by creating a fibre network that connects 107 council, education and health sites across the city.

Thinking local

Of course, the appropriate solutions for Barcelona are likely to be different to those suitable for Peterborough. Los Angeles, Lahore and Lagos may share similar challenges in terms of air pollution but they all have very specific capabilities in, say, energy generation, distribution and storage. Mindful that guidance on becoming smarter must begin at a local level and meet the unique requirements of residents, the new standard is not prescribing a one-size-fits-all model. Rather, a framework

for collaboration is provided for a city to apply flexibly.

When it comes to delivering on smart city goals in practice, four main areas of guidance are provided in the standard for city leaders to apply to their jurisdiction:

- **Delivery principles:** for city leaders to use to steer decision-making
- **Key cross-city delivery processes:** practical guidance to help different divisions within a city work together better
- **Benefit realisation:** clearly linking smart city investments with the economic, environmental and social outcomes the city aims to achieve
- **Risk management:** a checklist of issues which a city should regularly monitor.

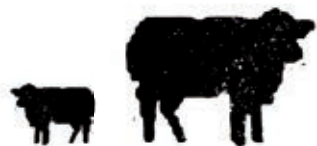
More than 150 years ago, Charles Dickens' social commentary painted a portrait of London that is unrecognisable today but provides a fascinating historical window back to the capital before Victorian visionaries devised a mass transit system, a vast underground sewage network and the world's first public drinking fountains. Similarly, the UK has consistently led thinking internationally on smart city standards, beginning with BSI's Publicly Available Specification (PAS) 181, which provided a smart city framework – adapted in part by the new international standard.

How today's city leaders deal with the challenges of urbanisation will shape more than the immediate infrastructure needs, as was the case in Dickens' London. It will lay the foundations for the cityscapes of the 21st century. **i**

DAVID FATSCHER is head of sustainability and energy at BSI.

"Cities are looking to transform the way they operate"

Agriculture



Farming in the UK is in a state of flux, with the 25-year environment plan and Brexit combining to mean that significant changes are on the horizon.

Many campaign groups believe that the role of agriculture in meeting more stringent carbon targets – and possibly even reaching a net zero-emissions economy – has not yet been fully acknowledged by politicians. Farming has a significant impact on the climate, generating 10% of the UK's greenhouse gas emissions in 2016. This figure has barely changed since 2008, according to the Committee on Climate Change's latest report to Parliament in June (see bit.ly/2Ku6CWw).

The committee flagged up farming as one of its priority areas for the government to act on in the next 12 months, criticising it for failing to implement low-cost opportunities for abatement. It noted that the voluntary approach used so far has failed.

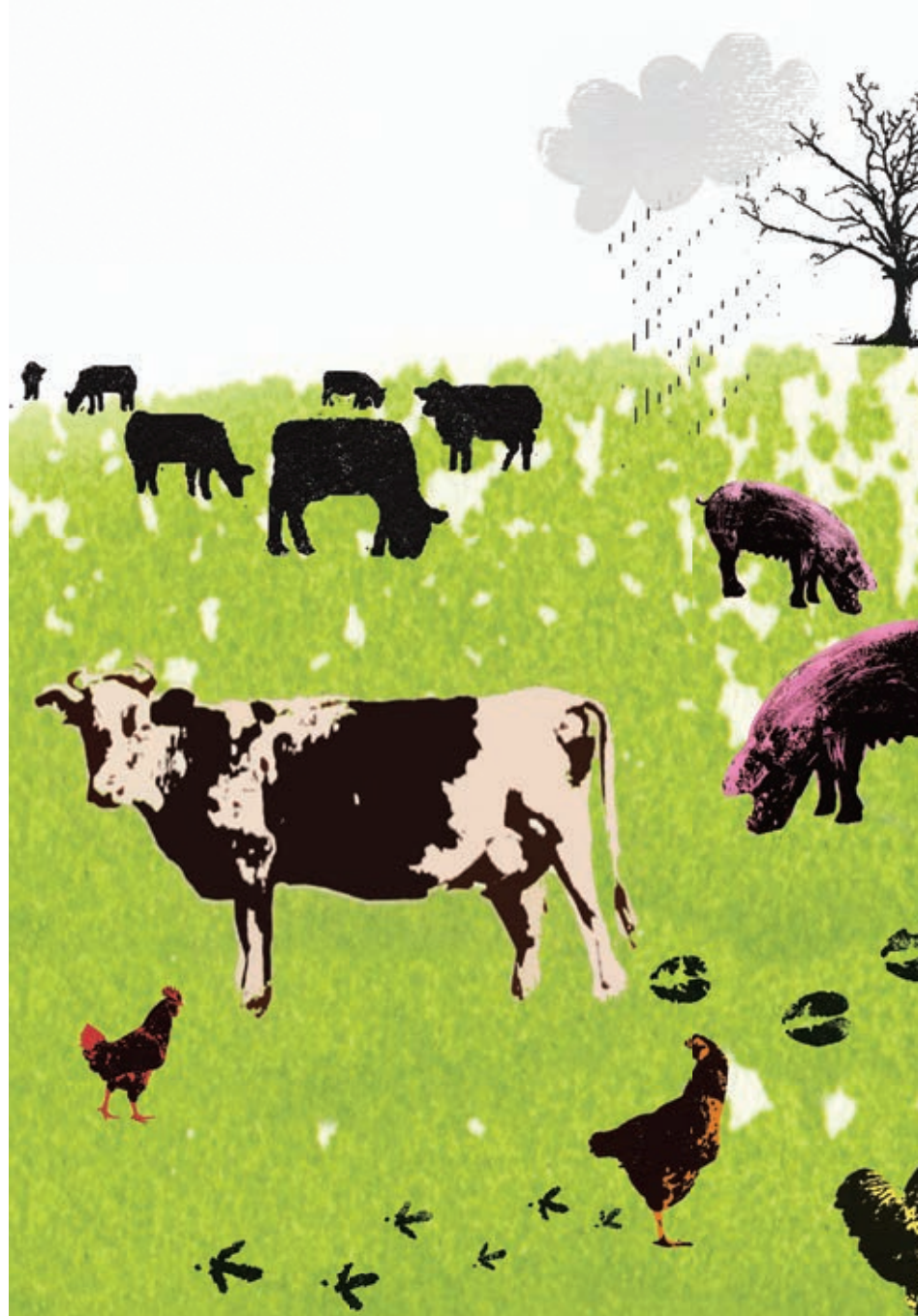
Environment secretary Michael Gove has stressed, however, that once the UK leaves the EU, it will leave the bloc's Common Agricultural Policy, with payments to farmers instead focused on "public money for public good".

This approach would see direct payments to large landowners reduced, freeing up money to reward farmers for helping to mitigate climate change – by restoring peat bog, for example, or carrying out other measures that sequester carbon from the atmosphere. Payments could also compensate landowners for creating new wildlife habitats, increasing biodiversity, reducing flood risk and improving air quality by lowering agricultural emissions, a consultation by the Department for Environment, Food and Rural Affairs suggests.

The consultation on these plans closed in May. An update from the department in August stated that it had received more than 43,000 responses, and more than 127,000 signatures on three different petitions on the issue. Defra aims to publish a bill on the proposals in the autumn.

Increased pressure

Whatever measures are eventually implemented, they will have to enable significant change. Only 58% of farmers are taking action to reduce greenhouse gas emissions, according to Defra's latest statistics on farm practices. For those not trying to mitigate climate change, almost half (44%) said that they did not think it was



Environmental pressures and Brexit add up to inevitable change for the agricultural sector in the UK. But what form is this likely to take? **Catherine Early** investigates

Greener pastures



FARMING EMISSIONS

An enormous problem to be tackled

10%

The proportion of the UK's greenhouse gas emissions generated by farming in 2016



20%

Estimated realistic cut in UK agricultural emissions by 2030, according to the CLA

necessary to do so, as the farm did not produce high emissions. However, 37% cited a lack of information as the reason they were not acting.

The think tank Green Alliance's event 'How will UK farming have to change in a net zero-emissions economy?' was held in London on 9 July, as part of the Horizon Debate series.

It was attended by experts on farming, the countryside and conservation, and participants believed that farmers would respond positively if they were given the right incentives.

"It's wrong to say that farmers are resistant to change. Farmers will follow the signals given to them, as in any other sector," said Christopher Price, director of policy and advice at the Country Land and Business Association (CLA). "In the past few years, we haven't had a government that's particularly interested in the climate change consequences of farming, so there hasn't been any pressure on farmers to do anything about it.

"I think that is changing now, and that the more progressive farmers are starting to recognise this," he added. He believes there is significant scope for emissions reduction in agriculture, and considers a 20% cut by 2030 achievable.

Liz Bowles, head of farming at organic certification body the Soil Association, agreed. "Farmers have been focusing on improving efficiency rather than changing practice. Farmers can change, but they haven't been given the right signals." She pointed to the large number of farmers who have installed renewable energy generation, for which they were given a financial incentive in the form of 'feed-in tariffs'; these pay them per unit of energy produced.

"It's a big challenge for farmers to know what they should be doing and to be incentivised to do the right thing, which will mean changing practices significantly," said Bowles.

She highlighted a study by the Research Institute of Organic Agriculture (FiBL), which found that increasing the proportion of EU land under

"In the past few years, we haven't had a government that's particularly interested in the climate change consequences of farming, so there hasn't been any pressure on farmers to do anything about it"

organic management to 50%, from the current level of 6%, by 2030 would have the potential to reduce EU greenhouse gas emissions by 30%. Over time, she said, all farmers will follow organic practices, even if they are not fully certified. Price agreed that organic farming can contribute to the solution – but as part of a suite of options.

Changing policy

Panelists also pointed to the role of consumption in enabling farmers to reduce emissions. Tara Garnett, coordinator and lead researcher at the Food Climate Research Network, said: "We need to talk to hospitals, schools and big purchasers of food, and look at how we can nourish people effectively at minimum environmental cost. Policy should be oriented towards that goal."

The focus should be on both consumers and farmers, said Bowles. "We need to help consumers understand the carbon embedded in food, as well as help farmers understand what they can do practically. We need to bring everyone with us – it's no use if half the farmers in the country become fed up and give up."

Any measures taken to address the environmental impact of farming need to be compulsory, said Ruth Davis, deputy director of global programmes at the Royal Society of the Protection of Birds. "We should aim to have compulsory measures that tackle soil and nutrient management on farms. We all need to acknowledge that the voluntary approach that's been taken so far in driving on-farm advances doesn't work," she said.

It's clear that the agricultural sector in the UK can expect big changes in the coming years. ①

CATHERINE EARLY is a freelance journalist

Troubled transition

Guyana is a small, English-speaking country in South America, about the size of the UK but with only 1% of the population. Until recently, its economy has been agrarian – but that could soon change, thanks to the recent discovery of large, high-quality offshore oil reserves. By some estimates, these could produce up to 750,000 barrels per day by 2030. This is great news for a country with a small, low-income population and a parliamentary democracy. However, concern is increasing that Guyana will succumb to the ‘resource curse’ that has dogged so many nations over the years; signs of that path being followed are already starting to show.

Guyana has a history of corruption and mismanagement of resources; racial rather than issue-focused politics; lack of strategic planning; power and influence being limited to a few politicians and families; and weak governance and monitoring systems. Exacerbating this is the fact that the product-sharing agreements between the government and the oil firms are skewed in favour of the oil companies. These agreements include clauses that make Guyana liable for environmental clean-up costs in the event of a significant incident, and exempt oil companies from future legislative changes that might affect operations – such as more rigorous environmental standards.

There are environmental impacts for surrounding countries, too. Given that the main activity

As Guyana embarks on the shift from agrarian to oil-rich economy, **Steve Rowan** and **Leeza Pickering** ponder whether it can avoid the pitfalls of the ‘resource curse’

is more than 100 miles offshore, with currents and prevailing winds, a large release in that area could well affect the Caribbean, with catastrophic impacts on the environment and tourism industry and a huge clean-up bill. The Gulf of Mexico disaster has shown us that catastrophes are not prevented by companies being savvy about corporate social responsibility, or by hundreds of millions of dollars worth of technical equipment and experts.

Golden opportunities

The anticipated revenue from the oil production will provide a financial boost to a nation with a GDP of around \$3bn (£2.3bn), primarily from agriculture, bauxite and gold. The government expects this revenue to be directed in seven areas, highlighted in Guyana’s Green State Development Strategy. Two of the areas are infrastructure development, and human development and wellbeing.

Around 90% of Guyana’s population lives in a low-lying 40km-wide coastal strip, which is at increasing risk of flooding. The area includes the capital, Georgetown, which already struggles to cope with rain deluges. The road infrastructure, welfare, medical, sanitation and education systems need investment, and port infrastructure is limited by port facilities and water depth.

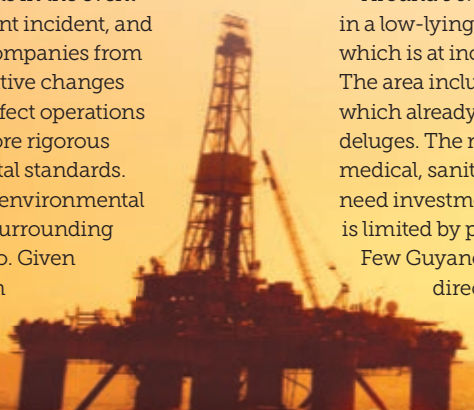
Few Guyanese people will see jobs and direct income opportunities from the offshore oil industry,

but their lives should benefit indirectly if infrastructure, social and environmental conditions are improved.

There is also talk of bringing gas onshore; this could provide cheaper power than the country’s current banks of diesel turbines, which result in Guyana having some of the most expensive electricity in the region. This is crippling for the manufacturing industry, which has all but disappeared.

However, Guyana has year-round sunshine, a long shallow coastline over which the trade winds blow, hundreds of river systems flowing from highland to lowland areas and hundreds of thousands of tonnes a year of biomass from the agricultural industry. With a population of 700,000 people concentrated in the coastal zone, and an annual power demand of less than 400MW, Guyana is well placed to use renewable energy. Despite this, it has no hydroelectric plants, no windfarms, no biomass plants – other those used by the sugar refineries – and just a handful of solar projects.

There are private proposals afoot to build a small modular refinery in Linden, the country’s second largest town; this would provide cheaper fuel to the Guyanese people, who currently have to import their fuel at high cost. The plans include using some of Guyana’s own oil (up to 30,000 barrels per day) to alleviate high fuel costs in the short-to-medium term, reinvesting profits in a nationwide renewable energy





grid. Cheaper energy would fuel economic growth and manufacturing industries.

Avoiding the risks

One threat that Guyana faces is the potential for tension between petroleum companies and local communities as more highly paid foreign workers come in. Such an influx could cause economic, social and cultural stress, as market prices rise to match this new income group and outpace the earnings of the local population.

Another risk is the temptation for Guyana to place all its development interests into its petroleum reserves while neglecting other industries and development sectors. The ability to plan and manage revenues effectively is limited, and an adverse tilt in market conditions can be devastating for a small country that has focused on oil alone.

“The priorities should be diversifying the economy from an early stage, and long-term sustainable planning”

Guyana has vast agricultural lands, bauxite, gold and diamond reserves, renewable energy opportunities and a low-cost but intelligent labour resource. It also provides an Atlantic gateway to northern Brazil, which has a much larger population, providing a shorter route to the Atlantic than through the Amazon. Furthermore, 85% of Guyana is untouched Amazon rainforest, providing a huge biodiversity and ecotourism resource. It would be a tragedy if this hydrocarbon

windfall was not used to develop these other resources equitably and sustainably.

The combination of specialisation in the natural resource sector and neglect of other industrial sectors can cause long-term erosion in a country's economic development. In the short term, the injection of foreign currency into the economy will spark growth and development – but in the long term, all the developments that would have been funded and maintained by the natural resource revenue, such as healthcare, education and infrastructure, will not be fully sustained unless other, sustainable industries are encouraged to grow alongside oil and gas.

The resource curse is not inevitable. Several countries have avoided it through economic diversification, investing in other sectors and having an equitable distribution of income. Such measures require a strong, mature political system and a socially inclusive culture.

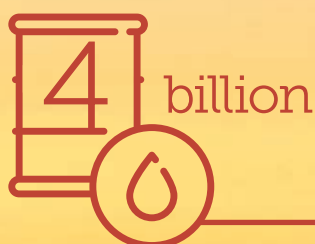
Guyana is going to be an interesting place to work in over the coming years, with the environmental stakes being high. The government should welcome the petroleum industry, but remain aware that the risks are myriad. The pitfalls are avoidable if the will is there and if the government seeks strong advisory partners. The priorities should be diversifying the economy from an early stage, and long-term sustainable planning. This will allow Guyana to meet the needs of its people, develop as a nation and ensure the production of this finite resource becomes a blessing rather than a curse. ^{iv}

STEVE ROWAN is managing director and **LEEZA PICKERING** is a consultant at Earth & Marine Environmental Consultants

OILING THE WHEELS

Managed properly, a Guyanese oil industry could have a positive long-term effect

The amount of oil equivalent barrels in the Stabroek Block, offshore of Guyana



of Guyana is effectively untouched Amazon rainforest



of the country's population lives below the poverty line



of graduates emigrate, mostly to North America and the Caribbean



David Burrows
examines how
activist groups are
influencing big
businesses to improve
their environmental
responsibility

POWER OF THE PEOPLE

Environmental campaign groups and global corporates have long been at each other's throats. The likes of Nike, Nestlé, Monsanto and Lego all have battle scars from (very) public skirmishes over labour, palm oil, genetic modification (GM) and Arctic drilling (by association with Shell) respectively.

Currently, plastic pollution is the topic that has activists up in arms, and Coca-Cola is the brand at the centre of the storm. "Don't let Coke choke our oceans" is the strapline being spread by Greenpeace – but few firms have escaped the ire of activists



or, increasingly, consumers and politicians. Activism at this scale on a single topic only happens once every few years, but Robert Blood, founder of Sigwatch, saw it coming. "Anyone prepared to listen to us would have had a two-year head start," he says.

Sigwatch first started monitoring how NGOs talk about corporates and their brands 20 years ago, when the big issue was GM. However, things "got serious" when the company started to quantify this earwiggling in 2010 (the year that Nestlé had its fingers badly burned by that Greenpeace video of an office worker eating what looked like a Kit Kat but turned out to be the bloody digit of an orangutan – a species threatened by the deforestation caused by rocketing demand for palm oil). Today, Sigwatch's global network of multilingual researchers track 7,000 or so NGOs on more than 700 issues, not only to determine what's happening and the reputational impact this has on thousands of companies, but also to pre-empt future problems.

If plastic is the big focus today, what's next?

"We get asked that a lot," Blood says, "but my prediction is meat" (as in eating less of it). This is based on what the data is telling him (though the signal is "quite weak" at the moment) and "gut feeling", with meat consumption becoming an environmental issue thanks to livestock farming's huge ecological footprint. It makes sense – the widely reported shift to vegetarian, vegan and flexitarian diets is currently being driven by concerns over health and animal welfare, but, bit by bit, the environmental cost of livestock production is capturing the attention of campaigners, and activity is beginning to snowball.

Greenpeace – the world's most effective environmental group by far, according to Blood – has only recently come out as anti-meat, or rather pro-veg. The issue, which until then had largely been 'owned' by WWF, is out of the group's comfort zone – but the fact that it's jumped on this particular issue is revealing. "It doesn't do that unless it thinks it can succeed," Blood explains, "so when it senses public opinion is running in a certain direction, it puts more

resources in." Other campaigns are subsequently dropped, so the focus on meat has been at the expense of GM (an issue that many NGOs now feel is "done and dusted", Blood says).

How quickly do these big campaigns gain traction?

Things can bubble along for a long time before overflowing into mainstream thinking. A positive response from the media, the public or politicians can all trigger widespread activity. In the case of plastics, it's been all three, which is why things have scaled very quickly to a point where regulations are already in force (microbeads) or being tabled (bans on plastic cotton buds and straws, for example, or taxes on single-use coffee cups).

However, purely environmental campaigns tend to be much slower to gain momentum. It's a similar story with human and labour rights, which, perhaps surprisingly, is only seventh in the latest table of global issues that

groups are campaigning on. That could change as mainstream environmental groups take up human and (especially) indigenous rights.

Look at the top issues, though, and little has changed in the past five years. Most activity in the 12 months to June 2018, according to Sigwatch, was on pollution, followed by biodiversity and health. Indeed, compare the latest findings with those in the year to June 2013 and the only significant difference is that climate change has moved into the top six.

What other issues should companies watch out for?

Animal welfare, sitting in eighth, is climbing the ranks pretty quickly overall. In fact, split the sectors up and it is currently the top priority for NGOs in agriculture – and activity is increasing all the time. It's also the top issue in food, with 'battery/caged/indoor poultry and eggs' commanding enough attention on its own to sit in fourth.

This means that companies taking action to improve welfare within their supply chains are beginning to win over NGOs. In the results for the second quarter of this year, McDonald's, Sodexo and Barilla Group made the top 10 of companies recognised by NGOs for their

MOST CRITICISED COMPANIES

Kinder Morgan
TransCanada
World Bank
Monsanto
Enbridge
Royal Dutch Shell
Nestlé
JP Morgan Chase
Essity
Coca-Cola

MOST PRAISED COMPANIES

Unilever
Aldi
H&M
Nestlé
BNP Paribas
Marks & Spencer
AXA
McDonald's
Signet Jewellers
Lidl

"Brands have learned to take NGO arguments seriously"



Source: Sigwatch

leadership on environmental issues, human and animal rights. French food service and facilities management company Sodexo and Italian food company Barilla Group have been commended for their stance on animal rights, notably on caged eggs (Barilla is committed to a completely cage-free egg supply by 2020, while Sodexo has pledged to source only cage-free eggs by 2025).

Which companies are most praised by NGOs?

NGOs giving praise to corporates is a relatively recent phenomenon, according to Blood. "It stems from the fact that fast-moving consumer goods brands, in particular, are more willing to engage and embrace the issues NGOs are working on," he says. "Companies have seen an opportunity to change their relationship with NGOs – they don't try to change their minds, they try to change the relationship."

In the past year, the firms most praised by campaigners were Unilever, Aldi and H&M. The fact that AXA made the top 10 is more surprising, but reflects the enthusiasm for investors that are seen to be taking climate change seriously. "Now that NGOs have got past the idea that all business is bad, they are using campaigns to put companies under pressure to address issues with meaningful action," says Blood.

An energy company that burns coal, for example, is merely one primary target that is hard to change (11 of the top 20 energy companies assessed have received not a single pat on the back in the past year, with energy far and away the most criticised sector). However, there are hundreds of secondary targets – the firms that buy power or invest in these energy companies – which can be successfully put under pressure to change their purchasing behaviour. NGOs call this strategy 'market change' – influencing the primary target by removing their customers, supply chains and investors. The Church of England's vote to divest from oil and gas firms is a case in point.

"Now that NGOs have got past the idea that all business is bad, they are using campaigns to pressure companies"

Can companies that receive high praise rest easy?

Not at all. This time last year, Nestlé was sitting pretty as 'most praised', but is now on the 'naughty list', with campaigners critical of its use of plastics and palm oil, as well as its bottled water range. This is not unusual – "change-makers", as Blood calls them, that are responsive to NGO campaigns "often receive praise and criticism in equal measure, to reward them for change and spur them into further action".

Unilever, Nestlé and H&M are examples. The fact that these are consumer-facing brands helps – they are fast-changing and can turn on a sixpence, as some of the commitments to reducing plastic use have shown. NGOs also use praise to play companies off against one another; a common tactic used is to get at least one brand to sign up to its demands before launching a campaign. They also like 'prodigal sons', it seems. "Curiously, companies that make changes before NGOs have pressured them tend to earn less praise, or it is more muted," says Blood.

Companies now realise that they ignore NGOs at their peril. "Consumer brands have learned to take NGO arguments very seriously and try, where possible, to anticipate issues, rather than wait for them to blow up in their faces," says Blood. 📢

DAVID BURROWS is a freelance journalist



TOP ISSUES

The most pressing global concerns for NGOs



Pollution



Biodiversity



Health



CSR



Wildlife



Climate change



Human rights



Animal rights



Consumerism



Product safety

Source: Sigwatch



Do sustainability reporting requirements place too much emphasis on transparency rather than action?



PETER PAUL VAN DE WIJS

Chief communications officer, GRI

"Transparently disclosed sustainability data exposes companies' actions to the public"

Transparency and action are two different touchpoints on the same continuum, with transparency being the starting point. Public disclosure of policies, management systems and performance informs decision-making.

Today, companies are facing demands for transparency and accountability. Investors, NGOs, customers and consumers want more data, and are not afraid to demand that businesses change their behaviour. Instead of blindly pursuing quarterly wins, businesses are expected to make a positive contribution. Transparently disclosed sustainability data exposes companies' actions to the public, informing external decision-making. This can lead to an investment fund pulling out, or a customer choosing another supplier, which can have a negative impact on performance.

Furthermore, reporting can be an important tool for organisations' decision-making, leading to improved conditions and the identification of opportunities. The data in a sustainability report can uncover trends that pose risks to the business, helping decision-makers to set the ship back on course. Sustainability reporting should be adopted as an integral tool for building a long-term business strategy, leading to meaningful action.



MICHAEL ZIMONYI

Policy and external affairs manager, Climate Disclosure Standards Board

"The focus of reporting is shifting towards a strategic approach"

Disclosure for disclosure's sake is in nobody's interest. Organisations providing good reporting of information related to climate change are doing so to understand the impacts of their activities and put measures in place to improve.

Since the development of the Task Force on Climate-related Financial Disclosures, businesses have heard the same message: disclosure of climate information needs to be embedded in financial reporting, to ensure rigorous governance over these matters and allow investors to make informed actions to support sustainable capital markets.

Companies and investors are realising that environmental matters have an impact on a business and its ability to create value. The reporting process will become more holistic, involving more than the sustainability department and allowing companies to establish stronger relationships with investors.

The focus of reporting is shifting towards a strategic and integrated approach that helps organisations understand and manage their exposure to long-term risks. Eventually, this will help investors fund and benefit from the transition to a low-carbon economy, providing better returns to savers and allowing companies to be fully equipped for the change.



KEVIN WILHELM

CEO, Sustainable Business Consulting

"The shift in emphasis towards actions and results is long overdue"

Transparency or action? For years, the focus was on transparency – we wanted companies to disclose what they were doing well and where they needed to improve, so that they couldn't greenwash. However, companies' efforts stagnated once they realised they could get away without committing to making progress, because they were only being scored on transparency.

This is why it is so important to focus on action. One thing I've learned is that nothing motivates a CEO more than a low grade. Whenever I'd start working with an organisation on a CSR report or CDP response, the CEO would say: "I want to get an A." These high achievers never got a low grade at school, and they aren't about to let their company get that score, either.

The CDP (formerly Carbon Disclosure Project) got it right by putting the emphasis equally on action and progress. Companies that had been scoring in the A to B range, based on transparency scoring only, began to receive Cs or Ds when the CDP shifted the emphasis towards action. This proved to be a major stimulus for companies to put teeth into their CSR programs.

CSR needs to be pursued with intention and urgency. The shift in emphasis towards actions and results is long overdue.

There has been dramatic growth in ESG (Environmental, Sustainability and Governance) investing during the past 20 years –

but along with this positive trend comes an equally dramatic rise in ESG reporting requirements, and a proliferation of rating agencies and assessment tools.

How are companies coping with this development? The Conference Board surveyed 61 sustainability executives to find out. The bottom line: while ESG reporting can be onerous, it's possible to manage and improve the process – and there are multiple benefits to be gained from it.

Key issues in ESG reporting

Some of the negative aspects of ESG reporting include:

● Providing ESG information

is a heavy lift. Companies take 18 workdays, on average, to respond to each ESG information request, and typically respond to more than one such request each year. Among reporting initiatives, collating responses for RobecoSAM and CDP reports are the most labour intensive, requiring 40 and 30 workdays, respectively.

● **Reporting is often a company-wide effort.** ESG information requests involve collating information from many functions, from communication and HR to investor relations, legal and procurement.

● **The array of ESG ratings and tools is disordered and confusing.** Survey respondents' concerns include:

- Lack of transparent methodology
- Ambiguous scoring systems
- Frequent changes in methodology without any formal communication
- Lack of industry-specific assessment and scoring methodology
- Redundancy of requests among agencies without

A route through the maze

Anuj Saush discusses how companies can manage their ESG reporting workload in a more productive way

uniform formatting

- A surfeit of assessments, leading to survey fatigue.

Approaches to managing the burden of ESG reporting

ESG initiatives are here to stay, so considering ways to manage the burden can be beneficial in the long run.

● **Standardise reporting.** Leading companies are proactive. They monitor ESG reporting trends and work to introduce relevant metrics as part of their regular sustainability reporting cycle.

They can also:

- Incorporate relevant findings from best-practice guides on non-financial reporting
- Introduce internal reporting processes to manage information requests better.
- **Practice selective reporting.** Companies should

INITIATIVES

There are more than 200 ESG agencies and initiatives. Many rely on publicly available information, but some rely on information submitted by companies. Some of the most recognised initiatives include Bloomberg, CDP, DJSI, EcoVadis, FTSE4Good, MSCI, and Sustainalytics.

consider engaging their stakeholders, including investors, ahead of time to gauge their expectations about ESG information requests. That way, they can prioritise what is important to stakeholders. To do this effectively, it helps to be transparent, and to communicate the company's selective approach to stakeholders.

● **Leverage results.** The heavy lift of reporting has an upside: companies do value the feedback of rating agencies. Agencies (such as CDP, DJSI, EcoVadis and others) provide feedback reports and/or best-practice forums to reporting companies. Smart companies use those results in several ways:

- To improve the company's own sustainability practices.
- To publicise results – demonstrating the company's sustainability credentials and engaging employees and shareholders.

The expectation is that, over time, ESG initiatives will be rationalised, and that the industry will adopt a simpler, more holistic framework to assess ESG performance. The Task Force on Climate-related Financial Disclosures (TCFD) is one such initiative – it is specific to climate-related issues only, and has the potential to become the standard for climate reporting. Furthermore, it might be possible to apply its principles to assess other ESG issues as well. Lastly, it is yet to be seen whether a government-mandated ESG standard could lead the way for uniform ESG assessment. 📌

ANUJ SAUSH, MIEMA CENV is a senior sustainability researcher in TCB's Global Sustainability Centre.

SURVEY

The Conference Board surveyed senior sustainability executives, all members of its Sustainability Councils in Europe and the US, to gather their views on ESG initiatives. The 61 respondents were from diverse industries, including financial services, ICT and manufacturing. More than 50% of the companies have revenues of between \$30bn (£23.1bn) and \$80bn.



Miles Thomas PIEMA

Farnborough Airport's environment manager talks exclusively to TRANSFORM about how the site became the world's first business aviation airport to achieve carbon neutral status

What were the first steps you took towards carbon neutral status?

The first step is to understand your carbon footprint and what emissions are your responsibility. You want to make sure there are no 'double-counted sources', where you are measuring emissions that are someone else's responsibility. That means looking at your entire organisation, from the infrastructure that you own and operate to the facilities, the equipment and the way your staff interact with them. By doing that, you can set a baseline for your carbon footprint – you know you are creating a certain amount of carbon emissions, and where you need to reduce them from. Over the past decade we have reduced our footprint by 42% just through technological, operational and training projects.

Does that include indirect

emissions from aircraft? Our carbon neutral certification covers scope 1 and scope 2 emissions, which we have direct control over. Scope 1 includes fuels used directly on site. Scope 2 emissions are off site, mainly to do with how the electricity we source is produced. We monitor scope 3 emissions, which include emissions from aircraft on the ground and equipment such as auxiliary power units, but those are not under our direct control.

What were the biggest challenges?

Ensuring everyone in the organisation knew what our target was. There are now specific environmental responsibilities highlighted in every job description, and if you get a job at the airport, you have to go through a training programme

that covers all aspects of environmental performance. Our policy is easily available to staff as part of our ISO 140001 certification, and it is published around the site in hard copies, as well as on our internet and ethernet sites. It is also important that you have support from the top level of the company – that's where the responsibility starts. It percolates throughout all levels of management and down to those working operationally.

"It is important that you have support from the top level of the company"

How important was ISO 140001 in achieving carbon neutral status?

It has run hand in hand with the carbon accreditation scheme, helping drive environmental awareness across the site and providing a framework for us to address issues with continual improvement. This all falls into three categories: improving technology, improving procedure and improving staff awareness and training. We have made small changes, such as lagging pipe work in a hanger, as well as large projects, such as upgrading lighting to LEED – a huge opportunity to reduce our electricity use.

What other initiatives have you been involved in? To apply for carbon neutral status, you have to take part in projects that offset residual emissions. One programme we got involved in



was a scheme that reduces deforestation in the Amazon and was independently VCS and QAS verified. We have also taken part in a local initiative that involved planting 3,500 trees around the local school. This is having an ongoing impact – the trees are used in educational programmes on the environment and habitat, and also visually improve the area.

Do you have any other targets for the future?

There are three areas that we will always have to address: carbon reduction, waste management and noise pollution. Achieving carbon neutral status was just one milestone, and as we apply for that certification each year, we will have to offset less emissions as the years move on. We have already achieved zero waste to landfill and want to improve our recycling rates, and we are also going to wage war on single-use plastic. Noise is also an issue that we have addressed in the past, engaging with our local community. We have had an airspace change proposal approved, and we invite the public to talk to us. I have gone out and had cups of tea in people's gardens, talking about the concerns they have and trying to build better relationships. This is all part of a continuous improvement for the long term. 

CONNECT

SOCIAL AND COMMUNITY NEWS FROM IEMA

EVENT

Sussex and Surrey: Augmented Reality Nature Trail

By Sandra Norval

On August 29, IEMA joined up with the beautiful Ashdown Park Hotel and local business Bluedotag to host an event with a difference.

The site has been managed by Kevin Sweet, estate manager, for 42 years with a focus on biodiversity. The 186-acre grounds include a Site of Specific Scientific Interest (SSSI), a golf course and a diverse range of wildlife – but, of course, the latter doesn't always appear on demand.

To enhance the experience, IEMA created an augmented reality trail, which showed what might be seen at each marker – for example, the butterfly that landed on Emily D'Silva's head!

➤ For the full event report: bit.ly/2OIQdIK

➤ Emily D'Silva and friend



IMPACT ASSESSMENT

Volunteers sought for steering group

Another busy year for the Impact Assessment Network steering group is coming to an end. In accordance with our terms of reference, four members are stepping down. Thanks go to Rufus Howard (Royal HaskoningDHV), Lauren Osmond (ERM), Steven Harding (Arup) and Joanne Murphy (EA) for their valuable contributions.

We are now looking to recruit four enthusiastic members to join the group for a three-year period from February 2019.

The group meets four times a year and drives best practice, innovation and advocacy.

To provide a diversity of membership, we particularly welcome applications from developers, lawyers, planners, utilities and local government. We also encourage applications from all ages, genders and nationalities, as we are keen to better represent the breadth of people within the IA community.

➤ For more information, visit www.iema.net/policy/ia. You can also contact Spencer Clubb at s.clubb@iema.net or Peter George at peter.george2@ntlworld.com

WEBINAR BOOK CLUB REVIEW

Doughnut Economics

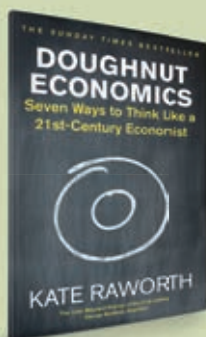
By Richard Clarke

The second of IEMA's webinar book club meetings took place in August, discussing Kate Raworth's *Doughnut Economics*. It's a book that has been making waves, and even forms part of the IEMA sustainability syllabus.

The session was ably led by Marek Bidwell, who began by summarising the doughnut model concept and the seven key elements of Raworth's argument. This was followed by group discussion.

At IEMA HQ, Spencer Clubb managed incoming questions and comments and patched in callers wishing to voice their opinions. The webinar software is easy to use, and viewers were able to contribute both verbally and in writing.

While *Doughnut Economics* is primarily concerned with economics, it also examines many other factors that resonated with attendees, including population, regenerative circular



economy models, natural capital and ecosystem services and whether green growth is possible.

An interesting area of debate centred around whether the doughnut model can be used in a professional capacity, such as in training courses and leadership meetings, or to support context and scope requirements in ISO 14001. The model is perhaps most powerful at representing the planetary boundaries model in a clear form.

Of particular interest was whether the model could allow a better dialogue with employees who aren't sustainability professionals, to help them make a connection between an organisation's commitment to environmental management and wider global concerns.

Ultimately, the book club works well as a prompt for many to read a book they might not normally consider, and gives participants a chance to explore new ideas in a comfortable way. Look out for the next session, and join the debate – it's a different and engaging way to work on your CPD.

➤ For the full event review: bit.ly/webinar_bookclub

WEBINARS

Blueprint for a new environment act



● Thu, Oct 11, 2018 12:30PM-1:30PM BST

The UK prime minister has announced that her government will bring forward the first Environment Bill for 20 years. It offers an opportunity not just to fix the Brexit governance gap when the UK leaves the EU, but to establish a world-leading framework for the environment. It's an exciting opportunity, and one that we can't afford to miss. This webinar is your opportunity to hear the latest thinking and a unique opportunity to get involved in shaping the new Environment Act.

➤ **Become part of creating a greener and more prosperous future and register:** bit.ly/2Ozcsoo

Explore the Social & Human Capital Protocol

● Wed, Nov 14, 2018 12:30PM-1:30PM GMT

Interested in measuring and valuing your organisation's impacts and dependencies on people and society? Join this upcoming webinar, where we'll explore the updated Social & Human Capital Protocol with the newly established Social & Human Capital Coalition and the World Business Council for Sustainable Development.

The launch of the Coalition marks a key step towards social and human capital being consistently measured and valued in line with financial capital among corporations, investors, governments and organisational decision-makers.

➤ **For more information and to register:** bit.ly/2Nb2KfA

A common social impact framework for rail

● Wed, Nov 28, 2018 12:30PM-1:30PM

Rail operations and projects present risks of negative impact and opportunity, but also wider value and benefits to the communities they serve. However, these positive impacts are rarely measured or maximised. In this webinar you will hear about a new, freely available social value framework ideal for the rail industry and how it can provide structure to conversations on social value.

The webinar is ideal for anyone working in rail and infrastructure projects or operations with a social sustainability interest, CSR professionals and EIA professionals considering social impact.

➤ **To register:** bit.ly/2p83a7X



QUOTE UNQUOTE

Great article in @IEMA_Transform 'treading lightly'. Careful to maintain the 'choice' aspect of informed life choice. #nojudgement #nocriticism. Wish all campaigns were as respectful.

@JANET_PLANETX



Thanks @IEMA_Transform @iemagnet for our featured #RewildingTheFuture event with @ChrisGPackham in this months mag. Looking forward to seeing @TimBalconIEMA on 18th September too! @ClimateActionNE @sharonmaguire9 #rewilding #biodiversity #Businesses #NorthEast #nature @SHARONENV1



Another naked copy of @IEMA_Transform arrived! I love the cover image and there's some fantastic articles to look forward to. Great content to find my articles with @JanMaskell alongside. We talk about my work in rail with deeper online article at bit.ly/2KXofuo Enjoy!

@CATALICITY

Hey @NWAmb_Karen your quote is in September's @IEMA_Transform! Receiving the Transform magazine without a plastic wrapper is great, it has arrived in good condition each time. No complaints from me. Take heed @CIWM please @DEB_NES

Excellent update of @iemagnet professional code of conduct – continuous learning and sharing #IClickedTheCode @ANNEMARIEWARRIS



Over the moon. Passed my interview and pleased to say I am now a Full Member of @iemagnet, and a Chartered Environmentalist. Massive thanks to everyone who has supported me through my journey. @JASE BROOKER





Why did you become an environment/sustainability professional? It wasn't a definitive moment. In 2008, I was working in mergers and acquisitions when I fell into poor health. After I recovered, I wanted to do something completely different, and ended up doing an engineering doctorate on the **life-cycle assessment of concrete**. As my knowledge base grew over the first two years of the research, I felt that this was something that was much bigger than one company, and that there was a real moral imperative to the sustainability agenda.

What was your first job in this field? I had a gradual introduction to sustainability. After various roles in production and business development industries, I became a territory sales manager for hard landscaping and sustainable drainage. This was my first contact with BREEAM (Building Research Establishment Environmental Assessment Method), more than 12 years ago.

How did you get your first role? After finishing my **degree in chemical engineering** at Loughborough University, I started on the graduate programme at Aggregate Industries.

What does your current role involve? As director of BREEAM, I am ultimately responsible for all the asset level schemes at the Building Research Establishment. These include the Home Quality Mark, CEEQUAL and all the BREEAM schemes, including new construction, communities and those used in existing buildings. The international use of BREEAM is also part of my role. BREEAM is used in more than



CAREER PROFILE

Shamir Ghumra FIEMA CEnv

Director, BREEAM

70 countries, so it does give you a wider appreciation of asset performance and sustainability challenges in different parts of the world.

What's the best part of your work?

Dealing with like-minded people – whether it be on the social science aspects, technology or more traditional environmental impacts.

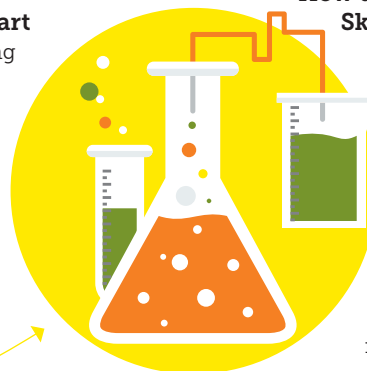
What's the hardest part of your job?

Reminding myself that this is a marathon and not a sprint. So much has been achieved by BREEAM since 1990, but there is so much more it can become and more it can contribute to a better built environment.

What was the last development event you attended?

The IEMA Fellows roundtable on the circular economy.

What did you bring back to your job? Further thinking on how future BREEAM schemes might need to develop, not just in terms of content but from a process/assessment perspective.



How do you use the IEMA

Skills Map? I find it a useful guide on where I might want to develop, and how this area overlaps with other developmental needs in this role.

What motivates you?

Believing that BREEAM is playing its part in creating a more sustainable built environment. BREEAM is the original scheme of its kind. With more than 500,000 certified buildings around the world, it is a privilege to have this role and work with such a great team.

What would be your personal motto? Never forget your humanity.

If you could go back in history, who would you like to meet? My grandfather – I was quite young when he died at the age of 64. I often reflect on how we might have shared our approaches to life, and how his strong sense of moral judgement helped him to set up his own business. ①

Visit www.iema-transform.net for the full member profile

Where do you see the profession going? I used to believe the role of the sustainability professional was to put themselves out of a job, because the issues of sustainability would be integrated into day-to-day working and behaviour in a business. Now I think that sustainability professionals will always be needed – perhaps under another name. As the agenda widens, new areas of specialism will emerge and interact with other professions. As with other professions, we must continue to learn and adapt.

What advice would you give to someone entering the profession?

Network within the IEMA membership, as it is vast and full of interesting people. I would also recommend getting involved with the regional groups – something that I did not do enough of.

"Sustainability professionals will always be needed – as the agenda widens, new areas of specialism will emerge"



LATEST MEMBER UPGRADES

ASSOCIATE (AIEMA)

Daren Bartram, Employer, Achilles Information
David Standley
Dawn Dawson, Milliken and Company
Dee Simon, Mars (UK)
Eman Al-Naqbi, Ministry of Education
Emma Twell, Bepak Europe
Fatima Al-Neaimi, Ministry of Defence
Federico De Gobbi, Wessex Water
Gary Taylor
Gayle Barclay
Glen Hull, GH Safety Services
Graeme Cram, Great Western Railway
Graham Livesey
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