

TRANSFORM

FOR ENVIRONMENT AND SUSTAINABILITY PROFESSIONALS

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September 2018
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Time to speak out

Why do professional conduct cases continue to hit the headlines?



PLUS

An unconventional optimist Jonathon Porritt fights back
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SEPTEMBER

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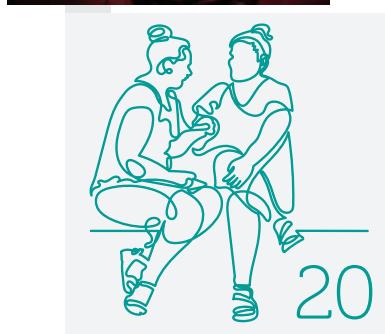
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TIM BALCON, CEO OF IEMA

What makes a professional?

There isn't a universally agreed definition of what 'being professional' really means. That's probably because the mix of traits that express professionalism varies depending on where you live in the world, your generation, even the industry you work in. Personally, I think it's a much bigger deal than your technical capabilities or how you present yourself. For me, being a professional is the sum of your knowledge, skills and values.

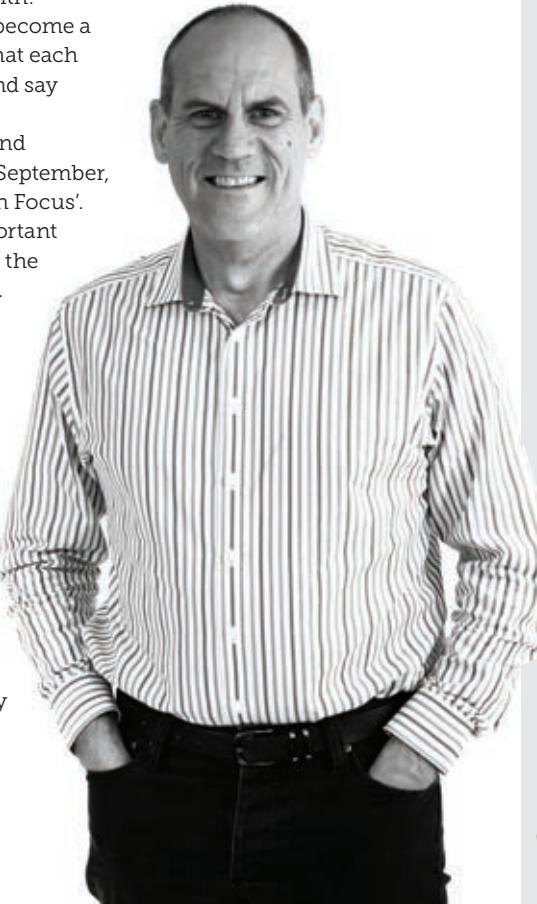
Our values speak volumes about how we work, our approach to our responsibilities and managing relationships – much more than qualifications or job titles could ever do. It's also our values that can drive us toward a particular occupation. It's fair to say that many of us came into this profession because we share a belief about what is important.

Our work crosses projects, sectors, and even oceans, which means constants can be difficult to find. So if our values and ethics can be that essential point of consistency, we won't go far wrong. Acting in accordance with our values is the difference between those who say they are a professional, and those who behave like they are. When we – all 14,500 of us – exhibit our high standards of behaviour, the impact of that aggregated demonstration is a force to be reckoned with.

And at a time when IEMA is on course to become a Chartered body, it's even more essential that each one of us is able to confidently stand up and say "this is what I stand for".

We will be talking about values, ethics and professionalism throughout the whole of September, our first 'Month of Professional Conduct in Focus'. While this is always a vital theme, it's important we have a prompt to debate and challenge the issues of trust and professional behaviour. This month is our focal point to do just that; a nudge to get together to talk about professional ethics.

As part of this focus, we are asking you to sign up to your refreshed Code of Professional Conduct. After many months of review, the new set of commitments is now live. Signing up to the code – as I have done – is your demonstration that ethics are central to how you work. You can find out more about the issue of professional conduct and your new Code over the following pages, and across a whole range of activity this month. I hope you'll get involved. #IveClickedTheCode



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.

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

Assistant editor
Sharon Maguire
sharon.maguire@redactive.co.uk

IEMA head of PR and communications
Katrina Pierce
k.pierce@iema.net

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

Sub-editor
Kate Bennett

Content assistant
Nicole Bains

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

Recruitment sales executive
Christian Plucknett
tel: +44 (0) 20 7324 2755
christian.plucknett@redactive.co.uk

Designer
Callum Tomsett

Picture editor
Claire Echavarry

Publishing director
Joanna Marsh

Subscriptions
Kate Hampshire
tel: +44 (0) 20 7324 2733
subscriptions@iema-transform.net
The 2018 annual subscription rate is £142.

Production manager
Aysha Miah-Edwards

Printer
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ROUNDUP

ENVIRONMENT &
SUSTAINABILITY
NEWS AND VIEWS

GLOBAL WARMING

Earth facing permanent 5°C temperature rise

Global warming could trigger an irreversible domino effect of dying forests, melting ice and hotter oceans that push temperatures up to 5°C above pre-industrial levels.

That is the grim warning from an international team of climate scientists, which says the carbon-storing trees and ice that were once 'friends' could turn into 'foes', spewing gases uncontrollably in a warmer world. If this occurs, it may no longer matter whether humans cut greenhouse gas emissions or not, as the 'hothouse' conditions could render parts of planet uninhabitable.

The scientists also warn that restricting global warming to the Paris Agreement's upper limit of 2°C may not be enough to prevent the series of cataclysmic climate events unfolding. "These potentially act like a row of dominoes," said study co-author Johan Rockström. "It may be very difficult or impossible to stop the whole row of dominoes from tumbling over."

These domino events include permafrost thaw, weakening of land and ocean carbon sinks, Amazon rainforest loss, reduction of northern hemisphere

snow cover, and loss of ice at the poles. Once a critical temperature threshold is crossed, these events could release an abundance of gas into the atmosphere, causing long-term heating of 4-5°C above pre-industrial levels and the sea level rising to 10-60m higher than it is today.

The scientists highlight the urgent need to accelerate the transition towards an emission-free world economy but say that biological carbon stores such as improved forest and soil management are also necessary. Technologies that remove carbon dioxide from the atmosphere and store it underground may also be required to halt temperature rises, which are already increasing by 0.17°C per decade.

Critically, the study emphasises that these measures must be underpinned by the fundamental societal changes that are required to maintain a "stabilised Earth".

"What we do not know yet is whether the climate system can be safely 'parked' near 2°C above pre-industrial levels, or if it will, once pushed so far, slip down the slope towards a hothouse planet," said Hans Joachim Schellnhuber, director of the Potsdam Institute for Climate Impact Research.

► bit.ly/2M2Dtni



PHOTOGRAPHY: GETTY



SHORTCUTS



Marriott hotels to eliminate one billion plastic straws

Marriott International has announced it will remove 1bn plastic straws and around a quarter of a billion stirrers from its properties within a year. This builds on the company's plans to eliminate more than 35m plastic toiletry bottles from its hotels every year and deliver a 45% cut in landfill waste by 2025.

CEO Arne Sorenson said the latest move was a "powerful step forward to reducing our reliance on plastics".

bit.ly/2vxb4v7



Food and drink giants join forces for new sustainable cup

McDonalds and Starbucks are developing the next generation of recyclable and/or compostable cups. It is hoped this will prevent 600bn cups from heading to landfills. Work is also being done with the WWF to ensure the materials are recovered for another high-value use.

"Working together across the entire value chain of these major companies will allow us to create a comprehensive and lasting solution to this critical conservation challenge," the WWF said.

bit.ly/2MwYbaM



Mastercard leads industry with science-based emissions target

Mastercard has become the first payments provider to have a greenhouse gas emissions reduction target in line with the Paris Agreement approved by the Science Based Targets Initiative (SBTi). The firm has committed to a 20% cut by 2025, dispatching a team to help global suppliers reduce emissions.

"Mastercard is demonstrating its business leadership and positioning itself for success in the low-carbon economy," said SBTi steering committee member Cynthia Cummins.

bit.ly/2vSwP87

ENERGY

Global wind and solar capacity hits 1,000GW



Wind and solar capacity reached new record highs this year after breaking through the 1,000GW barrier for the first time, data from Bloomberg New Energy Finance (BNEF) reveals.

It shows that total installed capacity worldwide has grown 65-fold this century, and has more than quadrupled since 2010 to reach 1,013GW, costing approximately \$2.3trn to deploy.

However, BNEF predicts that the next 1,000GW will take just four years to install and will be significantly cheaper, with total capital expenditure

of \$1.23trn expected between now and 2022. Wind power still makes up the majority of capacity at 54%, but is likely to relinquish the lead soon, after solar saw its share increase from 8% in 2007 to 46% today.

"Hitting one terawatt is a tremendous achievement for the wind and solar industries, but as far as we're concerned, it's just the start," said Albert Cheung, BNEF's head of analysis.

"Wind and solar are winning the battle for cost-supremacy, so this milestone will be just the first of many."

BIODIVERSITY

Mass extinction imminent if action is not taken, warns study

An unprecedented and irrevocable collapse in global biodiversity is imminent without concerted action to reverse species loss in the tropics, a first-of-its-kind study has found.

Led by researchers at Lancaster University, the study found that tropical forests, savannas, lakes and coral reefs are home to more than three-quarters of all species, despite covering just 40% of the planet.

However, a mass extinction is likely to take place in the tropics as a result of local human pressures – such as overfishing – and droughts or heatwaves linked to climate change.

This is also forecast to significantly impact humans, with 200 million people depending on coral reefs for fish resources and coastal protection, and agricultural regions relying on tropical forests for rainfall.

The researchers have called for a step-change in efforts to support sustainable development, and effective conservation interventions to preserve and restore tropical habitats.

The study's lead author, professor Jos Barlow, said: "50 years ago biologists expected to be the first to find a species, now they hope not to be the last."

CONDUCT

Out into the open

As cases of poor conduct at work become headline news, employees have shown that they are more willing to speak up. **Catherine Early** reports

What do a Hollywood director, a group of aid workers and a selection of MPs have in common? Not much on the face of it, but there cannot be many people unable to answer the question, given the media furore surrounding cases of sexual misconduct in these sectors.

"It does feel like not a month goes by without another high-profile case," says Claire Kirk, IEMA's head of member competence and capability. "These things have been happening for quite a long time, but haven't had the coverage and profile they've had recently."

While sexual misconduct cases dominate the coverage, various shades of misbehaviour have increasingly come to light in other sectors. The 2008 financial crisis raised questions over the ethics of the banking industry and led to the creation of new qualifications for bankers by the Chartered Bankers' Institute, notes Philippa Foster Back, director of the Institute of Business Ethics (IBE).

The law, medicine and media sectors have also all been taken to task for unethical behaviour and poor practice. Major sporting events have been marred by allegations of cheating through the use of performance-enhancing drugs.

The negative publicity generated by such cases can have serious consequences for the wider organisation. In the case of Oxfam, the misconduct of staff who used sex workers during the Haiti earthquake relief mission in 2010, compounded by the misconduct of those covering it up, has meant that the charity

will have to reduce the number of its poverty-relief programmes, following a fall in donations from the public.

Under pressure

Rising media coverage could reflect either an increase in cases themselves, or an increase in people bringing them to light. Results of a pan-European survey published by the IBE in July revealed that one-in-six employees had felt pressure to compromise their organisation's ethical standards, and that the number of employees experiencing this pressure has risen in all of the countries for which historical data was available.

"Employees are under more stress than ever, and this is increasing the pressure to cut ethical corners," says Foster Back. "The figures should be seen as a warning sign to organisations that they need to be supportive of their employees when it comes to ethical decisions."

More positively, the rising awareness of bad behaviour is prompting more people to report it, the survey found. Nearly one in three employees (30%) reported being aware of legal or ethical misconduct during the past year at work. People being treated inappropriately or unethically

was the most frequent type mentioned (46%), followed by misreporting hours worked (35%) and safety violations (30%). More than half (54%) of employees who were aware of misconduct spoke up – an improvement on 2015.

Nowhere to hide

"Because there is so much more publicity around it, people are feeling less reticent to call out bad behaviour, whether they go through social media or to a professional body," says Foster Back. "If people are behaving badly, there's nowhere to hide any more."

The IBE hopes that speaking up is starting to become 'business as usual'. The whistleblowing charity Public Concern at Work (PCAW) has seen a huge rise in people seeking advice. In February, when the Oxfam scandal came to light, calls to its helpline from charity workers surged by 44%. "When we see rises like this, it can be indicative of people not being clear about where to go for advice within that sector," says Francesca West, PCAW's chief executive. "We saw a peak in calls from NHS staff after the Mid-Staffs scandal [where poor care resulted in hundreds of patient deaths]. There was a loss of trust in the regulator because it was seen as not having done its job."

The charity has launched a benchmarking tool (bit.ly/2OKZtQY), which will give organisations an in-depth report that indicates how they have performed against similar organisations. It will identify strengths and weaknesses, along with recommendations on how to improve, which can be used when reporting to the board or regulatory body.

Setting an example

The environment and sustainability profession is yet to experience a major scandal – but commentators agree that it is important for professionals in this sector to set an example.

"I often describe our members as the conscience of an organisation," says Kirk. "Professional conduct is something we should be hot on – it's important for us, given what we represent."

"If people are behaving badly, there's nowhere to hide any more"

ETHICS

Click the Code this month

This September, IEMA is asking you to renew your commitment to a central IEMA policy by signing up to the new broadened and future-fit code of professional conduct.

At a time when ethics and trust in business has become a cause for concern across a range of professions, stakeholders are increasingly seeking assurances of workplace competence and ethics. Given the broad breadth and impact of your role, it's crucial you are able to demonstrate that your work is backed up by a verified set of appropriate values and behaviours.

Your IEMA membership has always provided assurance of your competence through our professional standards, strong governance and code of conduct. The standards and governance policies have all been refreshed in recent years, and now that a robust review of the code has concluded, it is time to embed a new version – one that is designed for the 21st century.

The new IEMA Code of Professional Conduct (right) is a framework of seven behaviours that set out how we behave as part of this profession, what others should expect from us and what we can ask of our fellow environment and sustainability professionals. Essentially, it guides us to make the right decisions at work where we may otherwise feel uncertain or unsupported. The code is also backed up by rigorous complaints and discipline processes, which means we can effectively and fairly investigate reports of unsuitable member conduct and take action on the rare occasions where it is necessary.

You can find out much more about your new code – including the review process, a helpful interpretation guide, case studies and guidance on resolving dilemmas – on the new Conduct Hub.

Go to iema.net/iema-code-of-professional-conduct today to explore the pages in detail before you sign up to the Code.

"Abiding by the Code is an obligatory requirement of IEMA membership"

Abiding by the IEMA Code of Professional Conduct is an obligatory requirement of IEMA membership, which means you must sign up to the new Code as soon as possible. We will keep reminding you to sign up, but your membership means more when you can show you meet all of the specifications. It's easy to renew your pledge; just follow these steps today:

How to Click the Code

Step 1: Go to iema.net and log in to MyIEMA.

Step 2: Follow the instructions on the on-screen banner to declare that you agree to abide by the new IEMA Code of Professional Conduct.

Step 3: Download your #IClickedTheCode social media card so you can publicly show your entire network that you've just renewed your commitment to excellent professional practice.

Step 4: That's it – you're done. You will need to state that you abide by the Code when you renew your membership each year, but until then you don't need to do anything further.

If you have any questions about the new code, your sign up or anything concerning member conduct, get in touch any time at info@iema.net



IEMA Code of Professional Conduct

As a member of IEMA I will demonstrate the highest professional standards to play my part in transforming the world to sustainability.

This means I will:

1.



Demonstrate and advocate **high standards** of professional practice.

2.



Apply my skills and experience to **protect and enhance** the environment, **improve** quality of life, and **contribute** to sustainability.

3.



Advocate and apply high ethical standards, acting with **honesty, integrity and objectivity**.

4.



Strive to ensure **equality of opportunity** and **respect diversity** in my professional activity.

5.



Act in accordance with my **level of competence**.

6.



Keep my **knowledge and skills current**, and continually develop my professional competence.

7.



Uphold the **reputation** of the profession.

NEWREGULATIONS

THE LATEST

■ GUIDANCE ■ CONSULTATIONS ■ LEGISLATION



23 MAY 2018

Climate change

The Climate Change (Emissions Reduction Targets) (Scotland) Bill will amend the Climate Change (Scotland) Act 2009 by setting revised targets for the reduction of greenhouse gases emissions.

cedr.ec/5dz



6 JUNE 2018

Brexit

The Law Derived from the European Union (Wales) Act 2018 aims to make sure legislation covering subjects devolved to Wales works effectively after the European Communities Act 1972 is revoked and the UK leaves the European Union.

cedr.ec/5dy



26 JUNE 2018

Brexit

The Nuclear Safeguards Act 2018 creates the legal framework for a domestic nuclear safeguards regime to operate in the UK, which will replace the current framework provided by membership of the European Atomic Energy Community ('Euratom').

cedr.ec/5e0



18 JULY 2018

Energy efficiency

The Draft Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 will make changes to reporting requirements for quoted companies, and introduces new reporting requirements for large unquoted companies and large limited liability partnerships to annually report on emissions, energy consumption and energy efficiency action.

cedr.ec/5du



1 OCTOBER 2018

Energy efficiency

The CRC Energy Efficiency Scheme (Revocation and Savings) Order 2018 revokes the CRC Energy Efficiency Order 2013, to essentially end the CRC Scheme subject to certain savings.

cedr.ec/5dt



12 JULY 2018

Brexit

The government has published its anticipated white paper on the future of the relationship between the UK and the European Union after the UK leaves on 29 March 2019.

cedr.ec/5dx



24 JULY 2018

Planning

The government has published a revised version of the National Planning Policy Framework (NPPF), which sets out its planning policies for England and how these are expected to be applied.

cedr.ec/5dw



26 JULY 2018

Energy efficiency

The Department for Business, Energy and Industrial Strategy is seeking evidence on how EPCs currently perform against three key attributes: quality; availability; encouraging action to improve energy efficiency.

cedr.ec/5dv

IN COURT

POLLUTION

Northumbrian Water fined following pollution offences

North-east water supplier Northumbrian Water has been ordered to pay nearly £34,000 in costs and fines following three separate pollution offences. The sentencing took place after discharge of untreated sewage occurred in Smithy Burn, Broomley, on 19 August 2016.

The discharge came from a storm overflow channel, which allows rainwater and sewage effluent to bypass sewage treatment works during heavy

rainfall. This helps avoid the works' capacity being exceeded.

Regulations stipulate that, in order for such overflows to be lawful, they must be incorporated into the works' environmental permit. This was not the case at Smithy Burn, where the permit stated that the discharges at the location should consist of treated sewage effluent.

Two similar offences took place in June 2015, at Summerhouse and Killerby Sewage Treatment Works near Darlington. These offences, given their



Northumbrian Water was fined over three incidents where untreated sewage was discharged

nature, were taken into consideration when sentencing was handed down.

Chris Bunting, prosecuting on behalf of the Environment Agency, told of how investigations into the offences had found a build-up of silt, which had prevented the flow from reaching the works. This then led to the flow being diverted into the storm overflow.

Malcolm Galloway, representing Northumbrian Water, claimed that staff had failed to carry out the inspection procedures set out by the company, and that the works at Broomley had an otherwise good compliance record.

During sentencing, District Judge Roger Elsey ruled that the culpability was low, but the amount of offences meant the fine had to be increased.

OTHER NEWS

European Union (Withdrawal) Act 2018 published

The long-awaited publication date of the European Union (Withdrawal) Act 2018 has arrived, commencing the biggest change to UK legislation in decades. There are four main functions to the Act, these being:

- Revocation of the European Communities Act 1972
- Conversion of EU law as it stands at the moment of exit into domestic law, and preservation of laws made in the UK to implement EU obligations
- Creation of powers to make secondary legislation, including temporary powers to amend the laws that would otherwise no longer operate appropriately once the UK has left the EU and to implement a withdrawal agreement (subject to parliamentary approval)
- Ensuring that decision making powers in areas currently governed by EU law will pass to the devolved institutions.

Background to the Act

On 1 January 1973, the UK joined the European Economic Community, which has since evolved into today's European Union (EU). A condition of membership is that community (EU) law be given effect in domestic law. This was done through the European Communities Act 1972, which gave effect to EU law and supremacy over UK domestic law.

On 23 January 2013, then-prime minister David Cameron announced his intention to negotiate a new settlement on the terms of the UK's EU membership, followed by a pledge to hold an in-out referendum on membership.

The European Union Referendum Act 2015 was published on 17 December 2015, and a referendum held on 23

June 2016, resulting in a 52% vote to leave the EU.

The European Union (Notification of Withdrawal) Act 2017 notified the European Council of the UK's intention to withdraw from the EU under Article 50 of the Treaty on European Union, which was given on 29 March 2017. A series of government white papers set out what the government was seeking to achieve in negotiating the exit from, and new partnership with, the EU, as well as how the domestic legal system will work once the UK leaves.

Status of retained EU law

For many, the important question is: what is the status of EU law? The Withdrawal Act simply states that existing domestic legislation which implements EU law obligations will continue to have effect after the UK leaves the EU.

In addition, direct EU legislation (EU regulations, decisions or tertiary legislation and annexes to the EEA Agreement)

will continue to have effect in, and be converted into, domestic law on exit day.

Environmental principles

There are concerns around the potential relaxation of environmental policies and principles post-Brexit. This has been addressed by the requirement for a draft bill, to be published by 26 December 2018, which will contain:

- A set of environmental principles
- A duty to publish a statement of policy in relation to the application and interpretation of those principles, which must be considered when making and developing policy
- Provisions for the establishment of a public authority that can take proportionate enforcement action (including legal proceedings if necessary) where they believe a minister of the crown is not complying with environmental law.

The environmental principles mentioned above must consist of things such as the precautionary principle, the polluter pays principle and sustainable development.

For more than 40 years, Jonathon Porritt has been in the vanguard of environmental campaigning, both within the UK and internationally. What does he think of the prospects for the next 25 years, heralded under the government's environment plan? Will it deliver Theresa May and Michael Gove's bold promise to leave the environment "in a better state than we found it" for the next generation?

This is a case of ask the question, retire a safe distance, hear the rumblings, then feel the blast.

Porritt admits that, after reading the 25-year environment plan, it was "impossible to feel anything other than the deepest contempt". A particular bugbear was the much-publicised pledge for zero unavoidable plastic waste by 2042. "Theresa May and Gove will probably be dead by then," he says. "So will I. The further away the target date is, the less reason there is to believe politicians will meet it. It's classic NIMTO – Not In My Term of Office."

Keeping *THE* faith

Jonathon Porritt is outraged by the government's 25-year environment plan – but despite his bitterness at environment secretary Michael Gove, and his fears for a post-Brexit UK, he still has hope for the future, he tells **Huw Morris**

He doubts whether the UK government is "genuinely focused on living up to the white paper's rhetoric", pointing to England's National Planning Policy Framework and its pro-growth agenda. This agenda, he has argued for several years now, is incompatible with sustainable development.

"They promise we are going to be able to do the right thing over the long term for future generations, when today we have planning laws with a presumption in favour of sustainable development. This is not sustainable development, but an imperative to build – particularly housing. An imperative to build offers no incentive to rebalance long-term generational issues."

Porritt dismisses the plan's emphasis on natural capital, a concept that has been worked on for more than decade by Forum for the Future, the sustainable development charity he co-founded in 1996 and still spearheads. The charity included the concept within its Five Capitals Model, alongside human, social, manufactured and financial capitals. Crucially, the model aimed to create a framework for understanding sustainability, to help leaders across all sectors make better decisions.

Under the government's plan, however, the concept has become a principle of "net environmental gain" when building housing and infrastructure. This has more strings attached than a philharmonic orchestra and is accompanied by various caveats and get-out clauses in the 25-year plan. There is little detail on how it will work during the next 25 years.

"If you cared for nature, you wouldn't call it natural capital," says Porritt. "You can't play fast and loose with such a powerful idea and put it out there with rhetoric, without real improvements in decision-making. The government's approach is that if you talk about it enough we will all agree with it. That is not enough."

He admits that some of his antipathy is personal. When Gove became education secretary in the Cameron-Clegg coalition government, one of

"This is a deregulatory-minded government and it is ideologically hostile to regulations and statutes to improve and protect the natural world"

his first decisions was to scrap the Sustainable Schools initiatives. Porritt, as chair of the Sustainable Development Commission, the previous government's "critical friend" on environmental policy, had spent much of the previous six years crafting the initiatives. Gove's decision, he says, was taken without reading the brief given by civil servants on why they were crucial. He barely conceals his contempt.

"Some of my anger is because of past experiences of government and of Gove's whole approach," he says. "I had ceased to be chair of the commission, but I was still lobbying to shore up these initiatives as they were an important part of sustainability. It's hard breaking down the silos of government departments, and the commission made a pretty good attempt.

"I still feel very bitter. I always assumed a new government would change a few things, but not completely undo the whole sustainability agenda across all government departments. I have the dispiriting feeling that anything to do with the environment and sustainable development is nowhere near a priority, notwithstanding Gove's attempt to bring it back."

Post-Brexit threats

Another source of rancour is the reaction of fellow environmentalists to the plan. "There was a kind of deal among non-governmental organisations (NGOs), under which a common position emerged to give Gove more breathing space to see if he had genuine intentions to make things happen – 'he is talking the right talk and we have not seen this for some time,'" Porritt says. Now he points to government proposals for a post-Brexit green watchdog, suggested in the plan, which would lack any powers to take the government to court. Green campaigners

have since expressed outrage that the new watchdog would only issue advisory notices to ministers.

Porritt believes his fellow campaigners should have seen this coming. "This is a deregulatory-minded government and it is ideologically hostile to regulations and statutes to improve and protect the natural world," he argues.

He also points to recent research by the Green Alliance, which highlighted that UK carbon emissions will significantly exceed legally binding targets for the years 2023 to 2032. To date, government climate policy has focused on emissions from vehicles, and heating and powering buildings. How products are made and consumed has a huge impact on their embodied emissions, a factor he claims the government has ignored.

"It really flags up the importance of resource efficiency and the degree to which the government's scandalous disregard for this whole dimension is now impacting on many other aspects of the climate and environment agenda," he says.

The plan should have been a first step in protecting the environment in the aftermath of the UK's vote to leave the EU – a decision Porritt is now coming to terms with. "Many people voted for Brexit because of their anger and despair at what happened to their country during the politics of the past 30 years, which has left them behind.

"If we now have a process that pushes all these concerns away, the anger and sense of betrayal will be huge. We already have a serious lack of trust in politicians. We have to be mindful of the millions of people who voted for Brexit."

Nevertheless, major problems lie ahead. Porritt cites a recent risk analysis by Friends of the Earth on UK environmental policy post-Brexit.

Interview

This found that the Norwegian model poses the least risk to current levels of environmental protection. The 'no deal' model poses the highest risk, invariably offering a lower level of protection, with enforcement mechanisms that are either non-existent or weaker than those provided by the EU.

Friends of the Earth's analysis, while welcoming the 25-year environment plan as indicating an "encouraging direction of travel", criticised it for failing to offer enough details. What details have been provided indicate a lower level of ambition than what is currently provided under EU law. Porritt agrees.

"I am very worried about what will happen once Brexit has taken place.

"I am very worried about what will happen once Brexit has taken place. Even the softest of the Brexit scenarios will leave the environment more precarious"

Even the softest of the Brexit scenarios will leave the environment more precarious, less protected and at risk of attrition. All of the environmental problems we face now will just get worse in a Brexit UK."

Fears for the future

Porritt first became involved in environmental issues in 1974 while teaching English at a west London comprehensive. A decade later, after heavy involvement in the Green Party, he became director of Friends of the Earth, leaving just before 1992's landmark Earth Summit in Rio de Janeiro, which he describes as a "life-changing experience". He says most, if not all, of the issues highlighted by environmentalists at that summit are getting worse.

On the broader international battle against climate change, Porritt admits

he is "struck by the numbers of people who believe it's too late because they are on the frontline". He cites the work of Peter Wadhams, a world authority on sea ice, who has visited polar zones more than 50 times. In 2016, he published *A Farewell to Ice*, which warned of the catastrophic implications of permafrost melting. The resulting release of methane, a substance 23 times more damaging in raising global temperatures than carbon dioxide, could lead to potentially apocalyptic floods, storms, fires and droughts. Wadhams concludes that there is still time for action – but it will have to be dramatic.

"If someone like Peter says it's not too late then we have to listen," says Porritt. "But it worries me that more

and more frontline scientists think we may have missed our moment."

Yet Porritt retains a sense of optimism. His 2013 book, *The World We Made*, looked ahead to key lifestyle changes and technological breakthroughs that could happen in the next three decades.

"It expressed the hope that we can marshall the political will to make solutions come alive," he says. "I still subscribe to the notion that we can rescue ourselves from the deep hole of thoughtless economic growth.

"I am full of hope. I do still have strong faith in humankind when it gets its act together – but I am not a conventional optimist. If you are too much of an optimist, you are not looking hard enough." ^T

HUW MORRIS is a freelance journalist

A CAREER IN SUSTAINABILITY

1973 Graduates from Magdalen College, Oxford with a degree in modern languages



1980 Co-chair of the Green Party



1984 Director of Friends of the Earth

1991 Trustee of WWF UK, a role he held until 2005



1993 Chairman of United Nations Environment and Development Committee for the UK

1996 Launches leading sustainable development charity Forum for the Future, now founding director and trustee



1999 Chairman of Sustainability South West



Board member of the South West Development Agency

2000 Chairman of the UK Sustainable Development Commission, a role he held for nine years



2005 Trustee of Ashden Awards for Sustainable Energy



Non-executive director of Wessex Water

2007 Publishes *Capitalism As If The World Matters*



2008 Non-executive director of Willmott Dixon

Publishes *Globalism & Regionalism*



2009 Publishes *Living Within Our Means*

2012 Chancellor of Keele University

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Treading lightly

Ivan Cicin-Sain explains why family planning and education are crucial elements in the fight for a more sustainable planet

We live in one of the most prosperous eras for humanity. Life expectancy and living standards are at record levels globally, and the occurrence of death from war or violence is currently very low. Despite this, our future is increasingly uncertain. Human civilisation is at risk from climate change, antibiotic resistance, resource scarcity and, potentially, artificial intelligence. At the same time, non-human life is not doing so well. Biodiversity is in decline and wildlife populations have dropped by 58% since 1970. The number of livestock (cows, pigs, sheep and chickens) is increasing in order to 'feed' human

living standards, but their own quality of life and life expectancy is unenviable.

Human overconsumption is a pressing concern – in particular, fossil fuel emissions, plastic pollution, water stress and the scarcity of certain metals, such as copper, aluminium and iron. During the past 100 years, carbon emissions per head have increased considerably (about threefold), but so too has the number of consumers – from 1.8 billion to 7.6 billion, a fourfold increase. Multiplying these two factors results in a roughly 12-fold increase in total global emissions since 1900, and this is the main cause of climate change. Apart from global warming, human activities continue to augment biodiversity loss and resource scarcity or degradation.

Projecting the future

Although global emissions have stabilised in the past few years, excessive quantities of greenhouse gases are still being

pumped into the atmosphere, increasing concentrations of CO₂. As affluence levels increase in developing countries, their emissions also tend to rise; coupled with significant population growth, the implications are significant. To reduce atmospheric CO₂ concentrations, our total emissions need to decrease significantly.

The human population (and associated livestock) is still increasing – the UN projects that there will be 9.8 billion people in 2050 and 11.2 billion in 2100. Granted, the population growth rate is decreasing, and many (including the late Hans Rosling) see poverty reduction as the magic bullet for population: as individual countries have risen out of poverty, their population growth has slowed down.

This 'demographic transition', however, is happening grindingly slowly in some countries. Our finite planet does not have the time or the resources for such a transition on a global scale, and a passive

"Having one less child has 20 times more of an environmental benefit than living without a car, and 70 times more impact than being a vegan"

approach to achieving a sustainable population will almost certainly result in widespread suffering and environmental destruction. In addition to poverty alleviation, gender equality, family planning and the promotion of smaller families are essential.

A smaller unit

When women are educated and have the same decision-making power as men, they tend to have their first child later in life and opt for smaller families. To realise this decision, they also need high quality family planning services. Currently, more than 200 million women worldwide have an unmet need for family planning.

The UN is aware of the societal benefits of family planning and empowering women, but does not make an explicit link to the alleviating effects it has on population size, climate change and resource degradation. This could be for political reasons – it may be worried about being misunderstood and criticised. However, many environmental NGOs, including Friends of the Earth, now openly acknowledge the impact of population growth. In its recent policy position on population (November 2017), the group specifically mentions the causal link between women's rights and smaller, more sustainable families.

Many scientists have been less shy. In November last year, 15,000 signed up to a Warning to Humanity, which identified population growth as a "primary driver" of environmental crisis and called for better planning and education to bring down family size. They also called for the estimation of "a scientifically defensible, sustainable human population size for the long term while rallying nations and leaders to support that vital goal." Since its publication, 5,000 more scientists have endorsed the warning. Meanwhile,

comprehensive research into climate change solutions has been conducted by Project Drawdown, a broad coalition of researchers and scientists. Its list of solutions shows that empowering women and girls is closely ranked with investment in renewable electricity generation and food efficiency (more plant-based diets and less food wastage).

Seth Wynes and Kimberly A Nicholas's article *The climate mitigation gap: education and government recommendations miss the most effective individual actions*, published in *Environmental Research Letters*, compares the annual emissions of several common environmental actions in tonnes of CO₂-equivalent. It shows that no environmental action comes close to the impact of having one less child in a developed country: this has 20 times more of an environmental benefit than living without a car, and 70 times more impact than being a vegan.

Family size is a personal issue, but then so is lifestyle. Even when children are brought up to live in an environmentally efficient way, a greater number of people inevitably consumes more than a smaller number. Having one less child reduces a person's ecological footprint more than everything else they can do put together – particularly when you take into account the impact of that child's descendants.

What you can do

We live in a world of doing, consumerism and techno-fixes, but it is our 'not doing' that generates the most benefits for the planet. This includes not having one extra child, but can also include not having that additional flight, or skipping a meat-based meal. The reduce-reuse-recycle hierarchy is as pertinent now as it ever was.

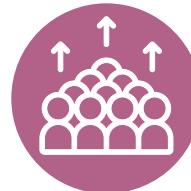
Decisions about parenting are deeply personal. And to have or not to have children is a fundamental human right

IN NUMBERS

Population and the environment



The planet's human population has grown from 1.8 billion in 1900 to 7.6 billion today



The UN projects that there will be 9.8 billion people on the planet in 2050, and 11.2 billion in 2100



More than 200 million women worldwide have no adequate access to family planning



Having one less child has environmental benefits equivalent to 58.6 tonnes of CO₂ savings

that everyone should be free to exercise without judgment or criticism. However, the personal decisions we make can be influenced by what is happening in the world around us. Right now, the world is facing environmental and social problems on a scale we have not faced before.

Population Matters' case is simple: a small family is a sustainable family. ¹

Further information

¹ Visit Population Matters at bit.ly/2Oj5Jz8 and the Population and Sustainability Network at bit.ly/2LNa7oG for information on controlling population growth

² Support Chase Africa, a charity helping African communities rise out of poverty via family planning and healthcare, at bit.ly/2M2xWt1

IVAN CICIN-SAIN is organisational outreach officer for Population Matters

Read the full length version of this article at bit.ly/2MLnqX8

The *FUTURE* of odour detection

Rick Gould investigates the development of electronic noses, which could help to detect odour pollution

Environmental regulators often receive complaints about odours – but when they visit the site, it is common for the smell to have vanished into thin air. Even if an odour is obvious, it can be difficult to detect with an instrument. Some people might notice very little, while others may be visibly distressed. This is the challenge: odours can be as elusive as they are complex – and even harder to measure. Until relatively recently, legislators often classed odours as a nuisance rather than a pollutant. This, however, is now changing, as there is increasing evidence that odours can be harmful to human health, while the science of measuring odours is improving rapidly.

The most effective tool

Complaints about odours have risen in parallel with industrialisation, urban growth and intensive agriculture, but most environmental legislators and policymakers do not consider smells to be as harmful as other pollutants, even though evidence linking odours with potentially damaging effects has started to emerge. Researchers in North Carolina, for example, found a correlation between complaints about odours from intensive pig-farms, levels of hydrogen sulphide in the air and spikes in blood pressure among the people reporting them.

Because of the way the brain processes olfactory data, monitoring odours is much more complex than measuring many chemical pollutants.

A single smell can consist of hundreds of

chemicals: more than 600 contribute to the aroma of coffee.

During an investigation commissioned by the Environment Agency, the consultancy RPS found that odorous substances from an intensive poultry-rearing installation included carboxylic acids, ketones, aldehydes, aliphatic hydrocarbons, aromatic hydrocarbons, alcohols and reduced sulphur compounds such as hydrogen sulphide.

Furthermore, scientists believe that people are capable of recognising at least 10,000 distinct aromas, although we do not know how the brain processes this information. Despite advances in measurement technology, there is currently no single instrument that can match humans' capability for detecting multitudes of chemicals and combining their olfactory effects into a single pattern. This is why the nose is still the most effective tool we have for monitoring odour.

A standard measure

The European standards body CEN has published one standard reference method (SRM), EN 13725, for measuring odour. Unlike other SRMs for measuring pollutants, EN 13725's core detection method is the human nose, rather than measuring instruments. It employs a technique called 'dynamic olfactometry': a trained panel of people will sniff samples of air, which are diluted in stages within a device called an olfactometer until only half the panel can detect an odour. This degree of dilution is designated as the threshold

of detection. The technique became popular with environmental regulators worldwide from the 1970s, with many developing their own olfactometers.

The problem was that these varying approaches were not always comparable or reproducible; there was no traceable reference standard to calibrate olfactometers, for example. Uncertainties around measurement prompted the need for a unifying SRM for olfactometry – so, in the 1990s, CEN mandated a work programme to develop EN 13725, which was published in 2003 and has significantly improved olfactometry.

"The most important improvement was the definition of the standard European Odour Unit (OUE), making this unit traceable to mass," explains Dr Ton Harreveld, convenor of the CEN working group responsible for EN 13725 and founder of consultancy Odournet. One OUE is defined as the odour threshold for 0.123 micrograms of n-butanol in a cubic metre.

"We also specified strict performance criteria in EN 13725, applied through ISO/IEC 17025 accreditation, together with independent checking through annual, interlaboratory proficiency testing. This approach has provided a measurement method to quantify odour emissions at a known uncertainty."

EN 13725 is now applied internationally and is specified in the latest EC Best Available Techniques (BAT) Conclusions for industries where environmental odour is a significant risk. Even before the EU published these documents, regulators such as the Environment Agency specified the use of EN 13725 in permits, together with emission limit values in OUE.

After 10 years, CEN initiated a review of EN 13725. "We now have a lot of international experience with the standard, so we are revising it to improve it further," Harreveld says. The improvements include better sampling procedures and a robust method to determine odour thresholds for reference materials in addition to n-butanol. In simple terms, the measurement uncertainty will be lower, meaning better monitoring and control. Meanwhile, researchers continue with the quest for the 'Holy Grail' – a portable, continuous and instant odour-monitoring instrument that can match the power of the human nose.

The birth of the e-nose

The term 'electronic nose' started to appear in scientific papers during the 1980s, when

"Evidence linking odours with potentially damaging effects has started to emerge"

researchers began developing instruments to mimic mammalian noses. These typically employed sensors, such as conducting polymers or metal-oxide semiconductors (MOS). The sensors were designed to detect either classes of odorous chemicals, or single compounds. A company in Arizona, for example, developed an MOS detector with a gold film, specific to hydrogen sulphide (H₂S).

E-noses have to be tuned and correlated with specific odorous substances and there have been notable successes with this technology, such as in the food, wine and perfume industries. Engineers have installed e-noses on a space station to detect leaks of hazardous gases, and have been deployed in an odour-monitoring network around the petrochemicals industry in Rotterdam, The Netherlands. However, e-noses are still limited when compared with the human nose, and there are no benchmarks or universal standards. To encourage innovation and credibility, CEN has mandated a working group to develop performance standards and test procedures for e-noses.

"The standard will prescribe a methodology for validating the odour indicator metrics produced by instrumental odour monitoring devices (IOMs), assessing to what degree these metrics are indicative for human odour perception," explains Harreveld. The validation will focus on metrics for the presence, classification and strength of odours. "IOMs will be tested in the context of the application, using real odour mixtures as a signal, comparing the results with measurements using EN 13725."

Technological developments in e-nose sensors have reached a plateau in recent years. "There is a lot of promising news, but claims are so far not verifiable," Harreveld says. "There are some interesting advances using biological sensors in combination with electronics." In other words, biomimicry. As EN 13725 has shown, nature currently knows best when monitoring odours. ↗

RICK GOULD MIEMA CEnv is writing in a personal capacity as a freelance journalist

On the right track

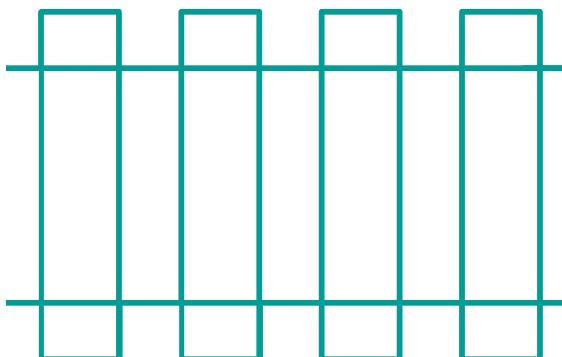
At Southern Rail and Govia Thameslink Railway, Sandra Norval helped develop the Towards a One Planet Railway Sustainability Strategy. She speaks to **Jan Maskell** about the learning outcomes (LOs) that emerged during the course of the project

What role did leadership play in this strategic development?

Clear leadership at board level demonstrated commitment to what we were doing, while at senior leadership level I led the Area Champions for the Environment (ACEs) and developed the competency matrix. My colleagues supported activities within their teams.

Every day, ACEs showed how anyone involved with the strategy could lead from any position and be innovative within their role. Members of the environment team, as it is now, secured their positions through working with the developing competence matrix. The most significant example of progression was Jase Brooker, who had built his skills by talking to and engaging with people, and was then seconded to my team. When I left he secured the head of environment role, building on what we started and developing the competence matrix further to enhance the training programme. He is committed to growing the strategy. It was designed to be flexible, so it should change with the organisation.

The strategy is working because there is power in seeing a peer taking action and making a change – it's inspirational. ACEs still take the lead on different projects, from nuisance management to recycling.



- ⑥ Leaders set a vision or direction and inspire others. They are motivated by their own convictions and values.

We tend to focus on talent development only when people get to senior roles, but we need to enable others to lead and reach their potential earlier, and to learn to self-criticise and assess what will or will not work. As sustainability leaders, we should be helping others to be responsible.

How important were networks and partnerships?

The main network was keen individuals who wanted to take on meaningful responsibilities alongside their key daily tasks. Being an ACE did not mean extra



pay – the motivation had to be that they wanted to do it and make a difference.

- ⑥ Meaning and purpose are key to positive psychological wellbeing at work, along with engagement and relationships. Networks of champions can boost these aspects by creating new ways of working.

The ACE network operated flexibly, taking different personalities into account. It was important to build relationships with other teams, give people opportunities to lead on projects and talk to people in similar roles.



"There is power in seeing a peer take action"

LO Humans are embedded in a network of social relationships, and the people we are in contact with have a powerful influence on our behaviour.

In what ways were education, skills and training part of your strategy?

One of my most important personal drivers was the Future Leaders Programme – Southern's senior leadership development programme. It gave me real insight into the world of learning and development. I had an amazing coach, who I questioned about the structure of the programme and how it could be adapted, and read about what other organisations were doing.

LO Effective leadership development incorporates structured learning about models and tools, individualised development such as coaching, and application to real projects or questions.

The IEMA Skills Map was my inspiration for the competencies; I set five levels, from Awareness to Strategist, and also set out relevant softer skills. This was a useful framework to tie in with the 10 One Planet principles, creating a matrix. Anyone could select the level and principle they wanted to work on, and they could do as much or as little as they wanted.

LO A good competency framework provides clear criteria for identifying achievement, training needs, and career development – shifting the emphasis onto individual behaviours.

I created forms to record the ACEs' experience in sustainability topics as evidence of transferable skills, creating portfolios for interviews. It was important these fitted in with other processes, such as Investors in People (IiP). They could then build personal development plans and negotiate time and support for activities.

LO The two main uses of performance appraisal are evaluation of an individual's performance against a set of standards, and identification of development needs.

Would this matrix be transferable to other projects?

Some of the lessons learned can be adapted and transferred to other organisations. Understand the organisation and get people on board to build longevity. Try to integrate with the culture. Use and adapt existing frameworks, such as learning and development systems. Remember that you are only leading if somebody is following.

LO Systems thinking recognises the relationship between distinct aspects of the organisation. Lessen the perceived amount of change by linking it to existing methods – this reduces resistance.

Communication is key. Try to understand blocks and barriers, recognise confidence or self-limiting beliefs and create a movement of people acting as advocates for the organisation but gaining benefits for themselves. Ask questions – what do people want to do to contribute?

LO Effective consultation and communication is vital to ensure engagement and commitment.

Norms, beliefs and values differ, but if cultural differences are considered, ideas can be transferred. To evolve, take the opportunity to create positive cultures.

LO Culture provides a sense of identity and belonging, and reinforces behaviour. T

SANDRA NORVAL FIEMA CEnv is the managing director of Catalicity, and was formerly head of environment at Southern Rail and Govia Thameslink Railway

DR JAN MASKELL is a registered occupational psychologist

For the longer version of this article, featuring a more in-depth look at the project's *learning outcomes*, visit: bit.ly/2KXofuo

LO Setting goals can encourage groups to adopt norms that are consistent with what the organisation wants.

Our work connected with local people and organisations, who worked together to improve their railways by adopting and enhancing stations or routes. We also developed a strong relationship with Biffa, which dealt with the franchises' waste management. ACEs led a zero-waste project, gaining experience partnering with Biffa. This led to a commitment to add six more projects to the Govia Thameslink Rail franchise.

The real deal?

A year into his job as UK environment secretary, has Michael Gove given us hope or hyperbole?

David Burrows weighs in

In July 9, David Davis and Boris Johnson – the Brexit secretary and foreign secretary respectively – both resigned, as neither felt they could back the EU exit plan thrashed out at Chequers the week before. Surely it was only a matter of time before Michael Gove, the environment secretary and fellow Brexiteer, also jumped ship? At time of writing, though, he is still there – in high spirits and “absolutely not” thinking of resigning according to Sky News. By the time you read this, he might have changed his mind; a joke going around Westminster says Gove would be the one to pick in a penalty shootout, as you think he’s going to go one way and he goes the other.

Politics is not a game, Theresa May said when she took office. The comment was most likely made with Gove front of mind – a man who, at the time, had been banished to the backbenches following a failed leadership bid and the bloody political backstabbing of Johnson. Still, a year later, he was hauled off the substitutes bench and thrust back into the game. His reinstatement was less surprising than the position – environment secretary.

Putting Michael Gove in charge of Defra is “much like putting a wolf in charge of the chicken coop”, reflected Ed Davey, the former energy and climate change secretary who worked with Gove in the Coalition cabinet. “We know he has a natural inclination to reduce regulation. This could endanger efforts to reduce air pollution or protect habitats if he fails to keep the protections on which we rely.”

A year on, how has Gove done? Has he given the environmental movement hope, or should we remain cautious?

Falling flat

Defra ran a blog to mark the anniversary, including seven “key pieces of work” achieved in the past 12 months. These include: the 25-year environment plan; a consultation to reform farm support; the ban on plastic microbeads and consultations on other single-use plastics; the appointment of a “tree champion” and funding to “kickstart the Northern Forest”; setting up a food and drink sector council to “champion the interests of Britain’s biggest manufacturing sector”; the Ivory Bill to tackle the illegal ivory trade; legislation for mandatory CCTV in English abattoirs; and

the publication of a clean air strategy. There was also a quote from Gove, who said: "I truly believe that our departure from the EU, with the right decisions, can enhance our natural environment. I look forward to continuing this work in the year ahead."

There is little doubt the environment secretary has been busy: he is mentioned in 94 announcements on the Defra website, almost two a week. His predecessor, Andrea Leadsom, managed just 38 in a similar length of time. As early as November 2017, Greenpeace UK executive director John Sauven was reportedly moved to suggest that Gove had "defied many people's expectations on the environment". Even George Monbiot, the environmental campaigner and *Guardian* columnist, said Gove was "saying the things I've waited for years for an environment secretary to say".

However, with the publication of the government's 25-year environment plan, those pats on the back

quickly turned to kicks up the backside.

"I admit it: I was conned by Michael Gove's rhetoric," Monbiot tweeted on 11 January.

"This 'plan' of his is pathetic." Libby Peake, an expert at environmental think tank Green Alliance, summed up the tenor: the prime minister's words had been bold, Peake noted in a blog, but "looking at the document itself, the language is rather less bold".

Quick wins

Consider the summary of targets in the plan. Most are kicked way into the long grass of 2030, 2040 or 2050 (for example "working to a target of eliminating avoidable plastic waste by end of 2042"), while many others are not really targets, with no benchmark and little clarity (such as "reversing the loss of marine biodiversity and, where practicable, restoring it"). Some even do both – "making sure that all policies, programmes and investment decisions take into account the possible extent of climate change this century". There has been similar criticism of the clean growth strategy, with the Climate Change Committee (CCC) finding "few new detailed policies to reduce UK emissions into the next decade and beyond".

This reminded me of a piece I wrote back in 2012 about how decent sustainability targets can be set. I looked back through my notes and came across this advice from one very experienced consultant: "The ambition of targets is all about the context. What do you want to achieve? How strategically important is the issue? How likely are you to drive significant change? What role will a target play in this? How easy is it? If you have the power, and the momentum, then set ambitious targets. If you don't, or the organisation has a culture of penalising failure, then temper the targets (but not the ambition)." He then listed 10 top tips, two of which were: choose a mix of easier and harder targets to achieve, and have some quick wins to demonstrate success.

Gove has certainly ensured his 'to do' list is top heavy with easy stuff: plans to ban plastic straws being a "typical example of picking off the low-hanging fruit when it comes to tackling environmental problems", according to Green MEP Molly Scott Cato. In fact, action on ivory trade, a U-turn on holding another vote on fox hunting

and a promise to ban bee-harming neonicotinoids have all been distractions from bigger headaches such as fracking, renewables, climate change and Brexit.

This year marked a decade since the Climate Change Act came into force. In June, the CCC published a progress update. There has been a "rapid reduction" in emissions in the electricity sector, but this achievement "masks a marked failure to decarbonise other sectors, including transport, agriculture and buildings", the experts said (the environment plan commits the government to further greenhouse gas emission cuts from agriculture, but doesn't say how or by how much). The update warned that this stagnation means the UK is not on course to meet the fourth (2023-2027) or fifth (2028-2032) carbon budgets and calls the next year "crucial".

"Most targets are kicked way into the long grass of 2030, 2040 or 2050"

Pragmatic approach

A betting man wouldn't put money on Gove being in his post this time next year, taking us beyond the UK's separation from the EU. Since the government agreed its Brexit plans, Gove has been its go-to man to defend this apparently softer, greener Brexit. A white paper has been published to set out the plans, offering environmentalists hope – a desire

to see the EU and UK "commit to non-regression of environmental standards" is significant. It will take time to unpick the details of the 104-page document, but at least environmental regulations remain firmly on the radar for negotiators.

It must never be forgotten that one of Gove's major achievements has been to give Defra a voice in the cabinet. He's behind the green Brexit message that is being plugged by all his colleagues, and he has even managed to get a commitment (not to mention the funding and staff) to deliver a new resources and waste strategy. Indeed, in his first speech as environment secretary, he talked of a "government of global Britain" that would not just be an advocate for freer trade but also a "champion of sustainable development, an advocate for global social justice, a leader in environmental science, a setter of gold standards in protecting and growing natural capital, an innovator in clean, green growth and an upholder of the moral imperative to hand over our planet to the next generation in a better condition than we inherited it".

Can he deliver that? Asked on BBC's *The Andrew Marr Show* whether the new Brexit plans were all he had hoped for, Gove said: "No, but then I'm a realist." This concerns me. A realist is someone who accepts a situation and is prepared to deal with it accordingly. Gove has already taken this stance in the Whitehall battle over the new environmental watchdog, with the Treasury reportedly managing to water down the proposals in the Environmental Principles and Governance Bill to ensure environmental regulations are loose enough so as not to torpedo trade deals with the likes of the US. This begs the question: if Gove is for turning once again, this time from political Pollyanna to pragmatist, is our environment better left in the hands of someone else? 

DAVID BURROWS is a freelance journalist

THIS MONTH WE ASK...

Is it time to introduce a ring-fenced tax for the NHS?



Let us know at iema-editor@redactive.co.uk if you have any questions you want answering in a future issue.

The big question



KRISTIAN NIEMIETZ

Institute of Economic Affairs head of health and welfare

"We should look for lessons from abroad"

A ring-fenced 'NHS tax' sounds superficially attractive. The trouble is, hypothecated taxes are an illusion.

Suppose an NHS tax raised £50bn, and the government added £50bn out of general taxation, giving the NHS £100bn. Now suppose the government hikes the rate of NHS tax, raising its revenue to £60bn. What would stop it from reducing its general taxation top-up to £40bn, thus keeping the overall NHS budget unchanged, and spending the extra £10bn on something else? Nothing – and international evidence from hypothecated taxes shows that this is what tends to happen.

Plenty of countries, regions and cities have specific X-taxes and Y-duties, but they do not generally spend more on X or Y than comparable countries, regions or cities. If we want to create a dedicated revenue stream for healthcare, we need a different system. In continental European social insurance systems, people pay health insurance premiums directly to an insurer of their choice; the government never gets its hands on it. The government still has responsibilities – it makes sure that everybody is covered. But it does not set the premiums or collect the money. Like the NHS, these systems offer universal healthcare; unlike the NHS, they achieve some of the best healthcare outcomes in the world. Rather than create new taxes, we should look for lessons from abroad, and learn from international best practice.



JUDITH JOLLY

Liberal Democrat party health spokesperson

"We need a cross-party health convention"

Yes. It is clear to everyone that the NHS is in crisis. The Conservative Party hopes throwing a bit more money will resolve the crisis, with little thought as to where the money will come from or how it should be spent.

The Liberal Democrats are calling for an immediate 1p rise on the basic, higher and additional rates of Income Tax to raise £6bn of additional revenue. This would be ring-fenced to be spent only on NHS and social care services – there cannot be a sustainable NHS without a sustainable social care system. The additional investment would be focused on social care, primary care, mental health and public health to ensure it will have the greatest impact on the quality of care patients receive.

For the inequalities that exist, as we see between physical and mental health, money will only get us so far. That is why the Liberal Democrats would also establish a cross-party health and social care convention. The NHS needs long-term certainty. We'd bring together stakeholders from other political parties, professionals from within the health and social care system, and public and patient groups, to see how to end the stop-start investment pattern. They would look at how to stabilise the health and social care finances and workforce, as well as the practicalities of greater integration. Through these initiatives we will have a health and social care system fit for the next 70 years.



RICHARD MURRAY

The King's Fund director of policy

"More money does not solve the problem"

The government has announced more money for the NHS, and most opinion polls show that the public accepts taxes must go up. Some polls show that the public would rather this was a ring-fenced tax for the benefit of the NHS.

Could hypothecation help? Possibly, but getting it to work is complicated. First, it needs to cover all NHS spending, otherwise governments can simply cut whatever has been left out. Second, there needs to be some independent assessment of what spending needs to be, or governments may set the tax too low. Third, there needs to be a way to smooth tax revenues over time, or the NHS will face unmanageable swings in funding as revenues fluctuate from year to year. Finally, it is hard to ring-fence NHS spending without adding in social care. Without this, it is too easy to shift costs between these services. This needs to be firmly fixed in the public's mind so that the next government to win an election can't sweep it aside through an Act of Parliament.

This is pretty challenging, but the prize is important: to end the cycle of boom and bust we have seen in NHS funding since its inception. More money does not solve this problem, given the number of times in the past that the financial taps have been turned on, only to be turned back off again. If hypothecation is not the answer, its supporters and opponents need to develop alternative ways to put health and social care funding on a firmer long-term footing.



Green healing

Health initiatives in parts of the UK are substituting social or green remedies for traditional drugs. **Elisabeth Jeffries** looks at the opportunities and challenges associated with this type of healthcare

In parts of Dorset, GPs have been prescribing health walks, conservation activities and wildlife gardening instead of antidepressants for particular patients. The Natural Choices programme involves an unprecedented collaboration between doctors and environmental charities.

This partnership – entitled the Natural Health Service of Weymouth and Portland – comprises the Dorset Coast Forum, Natural England, Dorset Countryside, the RSPB, Dorset AONB, Dorset Wildlife Trust, Public Health Dorset, local GPs and Bournemouth University. The group monitors the activities being prescribed, so it can shape further patient referrals in this area.

The initiative forms part of a recent health service trend in applying social and green prescribing – the use of local community and environmental resources for healthcare therapies. The movement has been gathering momentum over the past five years following pioneering campaigns by several doctors and environmentalists, and now includes a range of similar projects across the UK.

In January, the UK government incentivised such efforts further by stating that it supported the rollout of social and green prescribing. That announcement came not from the Department of Health and Social Care, but through the 25-year Environment Plan published by the Department for Environment, Food

and Rural Affairs (Defra). Its statement is a key moment for activists in the healthcare field, who, for many years, have been advocating a rounded and preventative approach to public health that includes the natural environment. Whether the statement prefigures the full integration of environmental therapies into healthcare depends on follow-up action. Certainly the arguments have become more persuasive.

"A couple of different agendas are affecting social prescribing," says Chris Naylor, research analyst at health thinktank the King's Fund. "First, a more holistic approach to health has been developing that recognises the community and natural assets. Second, people are making the case for a financial return on investment, which has also driven a lot of the interest in this."

The green pill

Several studies have shown the positive impacts of social prescribing on healthcare budgets, which has played a significant role in influencing policy makers. A study in Cornwall, for example, found that an investment of £127,000 into a GP referral service would yield an average return on investment of £3.12 over three full years per £1 invested, providing a dividend of £396,240. It would mean fewer GP and hospital visits, patient wellbeing improvements, an end to some patients' repeat prescriptions and more patients returning to employment. If further evidence of



this kind builds up, green prescribing may well become a more accepted choice by GPs themselves.

Clearly, their profession is the most likely group in the medical sector to benefit from this type of prescribing. Surveys regularly show that significant numbers of patients visit family doctors because they are lonely, for example, rather than because of an immediate medical condition. For these patients, and for some suffering from particular chronic conditions – both mental and physical – social and green prescribing may be appropriate.

The 'green pill' prescribed may not only resolve some of the patients' psychosocial problems, but also, perhaps, help avoid deterioration in mental and physical health caused by the problem. It also improves the effectiveness of GP surgeries by channelling more GP attention towards patient needs that are better matched with their training.

Many research studies demonstrate the health effects of making use of, and viewing, the natural environment. Numerous investigations have shown, for example, that physical activity in natural environments has a more positive impact than either exercise or contact with nature alone. Plenty of evidence also exists on the positive health effects of either living near, or using, green spaces. Meanwhile, a series of studies that have been conducted since the 1980s are beginning to provide a substantial – but as yet incomplete – evidence base relating to the health and wellbeing effects of nature-based interventions.

A sound rationale is beginning to emerge for replicating the efforts that are ongoing in Dorset and other counties and cities. However, several factors may obstruct the fulfilment of this policy. One is that the 'compassionate Conservative' image that Defra may wish to project for political reasons could be short-lived. Another is the time span envisaged in the paper, which is five times as long as any government administration – future governments might well abandon the policy.

A third is the economic argument itself, which often provokes opposition in the politicised atmosphere of NHS finance. "When

people make the case for social prescribing, sometimes there's a temptation to make it on financial terms because money talks," says Naylor. But in public sector healthcare, finance is not the only consideration. "It can't be the only basis for the case, because it sets a precedent that you are investing in public health only to save money."

Equally, the capacity to save money could be engineered into a justification for reducing budgets. Yet financial assessments indicate that hospitals and GPs have already experienced significant real-term funding cuts in recent years, so it makes sense to direct medical care more appropriately. The outcome from some of these rather contradictory policy signposts will be determined on the political battlefield.

In the meantime, if social prescribing were to be integrated across every clinical commissioning group, immediate barriers would need to be overcome – statutory local NHS organisations that plan and commission healthcare services. The most obvious is the structure underlying GP prescribing, which is geared towards local chemist shops or referrals to hospitals – a fairly compact arrangement.

In addition, GPs will have to operate as part of a consortium with environmental groups and health NGOs running green healthcare schemes. They will need to create a social prescription loop into the community, while environmental groups will need to forge new relationships with GP surgeries.

A new approach

Solutions to achieve this more complex arrangement have already been proposed. A pilot in Brighton in 2015 tested the possibility of introducing 'community navigators'. Working as volunteers in 16 GP surgery practice teams, the navigators made 361 referrals. Many of the people referred had social or

milder psychological problems. In one case, an isolated man whose wife had dementia was referred from the GP to a garden-sharing programme. Plenty of other types of green prescribing exist, such as care farming – working on a farm for health benefits, green gyms and group walks.

The Brighton pilot showed that environmental charities might face barriers when engaging with the GP surgeries in the first place. There were other challenges, such as culture differences between the health and voluntary sector, and whether there was capacity for developing new partnerships alongside an existing service. However, advocates of social prescribing are trialling the navigator concept in a few areas, to work through the problems.

To many activists promoting sustainable healthcare, the government's decision to back social prescribing is a considerable step forward and possibly a sign of further change in this direction. It shows a change of emphasis from the post-war era, when massive progress in antibiotics and other drugs meant that less attention was paid to the environmental determinants of health.

Professor George Morris of Exeter University, a former science advisor to the Scottish government, is optimistic about the priority that may in future be placed on environmental matters in health policy using practices such as green and social prescribing.

"In the past few decades, medical research had relied on 'black box' epidemiology in which, if you have good computing power and consider behavioural risk factors such as smoking and diet, you examine these in relation to the disease in question. As a result, the notion that these diseases occur in a social and physical context is airbrushed out. The environment has been a casualty of that in policy-making," he says.



"Environmental groups will need to forge relationships with GP surgeries"

Some post-war discoveries have also led to the individualisation of health. This, he says, encourages the prevalence of an "omnipotent health professional with a curative rather than preventative approach". As a result, public health, which plans the wellbeing of the whole population, may take second place.

However, a different approach has become more apparent in recent years. Some of the change originates from various landmark studies funded by big philanthropic institutions or UN agencies, such as the World Health Organisation. Reports by the Organisation for Economic Cooperation and Development, for example, have shown that intervention in air pollution pays for itself, so it is an economically sound policy for both the environment and health. Publicity on air quality has since intensified, setting a precedent for further similar environmental health campaigns promoting public health. ¹

ELISABETH JEFFRIES is a journalist specialising in business and the environment

SOCIAL AND GREEN PRESCRIBING: HOW IT HELPS



Physical inactivity in England is estimated to cost the economy around £8.2bn per year



Inactive people visit GPs 5.5% more often than active people, and spend 37% more days in hospital



Blood pressure and muscle tension have been shown to decrease through time spent in nature



Physical inactivity is responsible for 17% of early deaths in the UK – on a par with smoking



Green space improves air quality, helping to prevent and reduce diseases such as asthma



Spending time in green space provides social benefits as well as health benefits

Source: NHS Forest

CONNECT

SOCIAL AND COMMUNITY NEWS FROM IEMA



CONFERENCE

Take a walk on the Rewilding side!

18 September 2018

Businesses in the North East will welcome leading naturalist and TV presenter Chris Packham to the 'Rewilding the Future' conference, which is being held at the Marriott Hotel in Gateshead this month. Delegates will hear about the latest thinking in rewilding and nature conservation, the principle of reinstating natural processes and missing species, and

ways businesses can support this important work while identifying opportunities.

Around 100 representatives from the business world are expected to attend, and the event is sponsored by Resilient Business Systems, with support from local and national organisations – including WWT Washington, IEMA, Stephenson Mohl and JDM Earth, with more to be confirmed.

For further details and to register go to: bit.ly/2O4I8Id

EVENT

RWM Exhibition returns to Birmingham's NEC

12-13 September 2018

The Recycling and Waste Management Exhibition is making an exciting comeback to Birmingham's NEC for its biggest show to date, co-located with four other industry leading events: Future Resource Expo, Contamination Expo, Flood Expo and M&CCE Expo.

During two action-packed days, the NEC will play host to more than 350 inspiring seminars from industry leaders, 500 innovative products and suppliers that are currently revolutionising recycling and waste management and 20,000 environmental professionals from across the globe.

For further details and to register go to: www.rwmexhibition.com

OFFICIAL LAUNCH

New IEMA Sustainability in Practice Guide

27 September 2018

IEMA's latest Sustainability in Practice Guide is on 'Managing compliance with environmental and human rights law in organisations'.

Laws and regulations provide a cornerstone for protecting the environment and society from harm. Organisations have a legal and moral duty to comply with these laws and regulations, but given the complexity of legal requirements regarding environmental and human rights protection, this is a significant challenge for them.

To rise to this challenge, IEMA will officially launch the second edition of its practitioner guide on Managing Compliance with Environmental & Human Rights Laws in Organisations in collaboration with Colleen Theron, Fellow Member of IEMA.

For further details and to register go to: bit.ly/2nkWL8A



Thank-you IEMA @iemanet for sending the 'Transform' magazine without plastic wrapping. Example to be followed! #plasticfree
@MANELROURA

My copy of #NakedTRANSFORM has arrived in good condition. Well done to @iemanet and @IEMA_Transform for eliminating packaging and not just "shifting the environmental burden around" @TimBalconIEMA
@MAREKBIDWELL



New NAKED Transform just hit the doormat! No more plastic wrapping Well done, @iemanet @IEMA_Transform
@MISSRICHTER91



Hey aciwm did you know @IEMA_Transform has gone naked? I know the plastic keeps the CIWM Journal dry and can be recycled at the supermarket with plastic bags but what about the #WasteHierarchy? #NakedTRANSFORM
@NWAMB_KAREN

My IEMA magazine just arrived with no plastic wrap. I hope this was intentional @IEMA_Transform? All these magazines coming wrapped in plastic is such a #waste
@KATGLOBAL

What a glorious day to be working from home. Loving the new #Naked TRANSFORM magazine! Arrived in good condition without an #plastic #packaging – Well done @iemanet. Also, great to see our IEMA NE #RewildingInPractice event advertised.
@ANNA_LISAMILLS



Transform has gone naked! Thanks you @IEMA_Transform & @iemanet for ditching the plastic wrapping. Arrived safely in good condition. Now it's up to others to follow.
@ESHCON



WEBINAR

What Does Professional Ethics Mean in Sustainability?

⌚ Sep 27, 2018 12:30 PM - 1:30 PM

In a world where breaches of professional ethics keep hitting the headlines, we're asking has this changed what people expect of professionals? IEMA's month of focus on professional conduct and ethics at work continues in this webinar, so join us for an expert look at the issue. We'll examine why ethical business practices are so important, particularly for environment and sustainability professionals, and how the practices and codes that underpin the concept can be a real enabler on the journey to sustainability.

⌚ bit.ly/2vLnEHc

NETWORK NEWS

Environmental Innovation Event

IEMA Wales, as part of the Wales Festival of Innovation, held a highly engaging and punchy event based on novel environmental solutions that have been developed or delivered in Wales. The event included six presentations, delivered in a PechaKucha format (20 pictures x 20 seconds), on a variety of topics, including alternative fuels, geotechnical solutions, Wales' first plastic-free shop, treating mine water, biomethanation and the visual impact of electricity infrastructure. Delegates reported it was an excellent opportunity to network and share ideas. One attendee called it a "great event with excellent presenters, talking about a wider range of innovative projects".

The Wales region wants to run another event before the end of the year, so if you have an interesting product or service, please make contact.

⌚ regions@iema.net



NETWORK NEWS

Save the Date: The Future of ESIA – Enabling Access to Young Professionals

This event will include sessions lead by guest speakers from both the consultancy and lender sides of the industry. It will provide a great opportunity to share experiences and knowledge.

⌚ If you're an experienced professional and believe you can offer insight or are willing to give a presentation on international ESIA, please contact GESAYoungProfessionals@gmail.com

LATEST MEMBER UPGRADES

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Abigail Baker, SMC Pneumatics (UK)
Adam Reed, Warburtons
Afra Binkhadim, Ministry of Education
Aisha AlKaabi, Ministry of Education
Aisha Alshehhi, Ministry of Education
Alan Caddies, Booth Welsh
Alexandros Tsirtsikos Alya Al-Shehhi, Ministry of Education
Andrew Clarke, Robertson Facilities Management
Andrew Kellet, Adk Safety Essentials
Annette Koch
Antony Smith, Marshall Aerospace and Defence Group
Anugya Punetha
Arthur Nyathi, Self-employed
Ashley Kevan, Vascutek
Asma Al-Qadi, Ministry of Education
Asmaa Ahmed Hassan Habiba, Ministry of Education
Aymen Abu Gharbieh, Ministry of Education
Badria Al Marashda, Ministry of Education
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Bonnie Morgan, Warwick Chemicals
Bradley Taylor
Brian Gray, Princes
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Charles Pegg, Salix Finance
Cheryl Hardacre, Taylor Made Joinery Interiors
Christine Almeida
Christopher Allan, Jacobs
Craig Summerhill, Siemens Rail Automation
Daniel Jane, V S Rail Limited

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Charlotte Bonner, National Union of Students
Christopher Hodgson, Capgemini UK
Christopher Lee, Horiba UK
Conor Wells, LUC
Craig Cole
Ellen Barrow, Frazer Nash Consultancy
Gregor Black, RHI Refractories UK
Kara Brussen, Arup
Lara Young, Costain
Laura Cristea, National Union of Students
Mark Saunders, North Devon District Council
Matthew Wainwright, AECOM Infrastructure & Environment UK
Michael Parker, Defence Infrastructure Organisation
Michelle Farrell, National Union of Students
Oliver Lockwood, ESP
Paul Baccarini

Rachel Agar

Nissan Motor Manufacturing (UK)
Rachel Soper, National Union of Students
Robert Gould, RSK Environmental
Robert Warren, British Oxygen
Tamsin Stevens, AECOM
Tiffany Lewins, Kingfisher Ecology

FULL MEMBERSHIP

WITH CHARTERED ENVIRONMENTALIST (MIEMA CENV)
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Alexander Johansen, Pendragon (Design & Build)
Alison Walker, HS2 – High Speed Two
Andrew Smith, Arcadis
Daniel Boyd, Jacobs UK
David Amienyo, Siemens
Harriet Waters
Holly Edwards, Magnox
James Bird, Environment Agency
Jamie Williams, Crossrail
Jane McMillan, SP Energy Networks
Joanne Robinson, WSP Parsons Brinkerhoff
John Haddow, PHS
Jo Wall, TACP (UK)
Kathryn Barber, Prudential
Lee Kania, Magnesium Elektron
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Matthew Blaikie, Auckland Council
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Saima Baig, Freelance environmental
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Toby Andrews, Hilson Moran Partnership
Zeta Watkins, Hodgkinson

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Brian Marshall, Reconomy (UK)
Daniel Kenning, Splendid Engineering
Darren White, Tideway
Helen Manns, University of Northumbria
Helen Woolston, Transport for London (TFL)
James Dixon, Newcastle Upon Tyne Hospitals NHS Foundation Trust
Jo Murphy, Environment Agency (NEAS)
Karl Fuller, Environment Agency (NEAS)
Mark Dempsey, Hewlett Packard
Michael Seymour, Shell Upstream International, Australia
Nicholas Murry, Bath Spa University

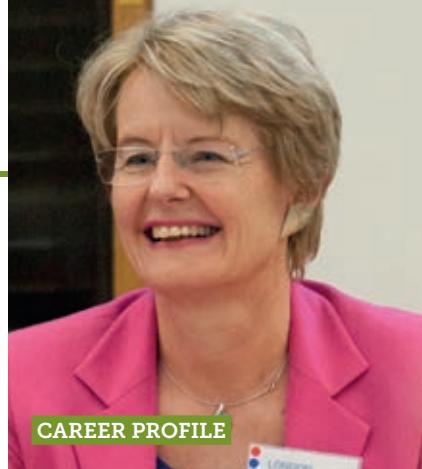


Why did you become an environment/sustainability professional? No earth-shaking dream, but it's a topic that feels exciting and in tune with who I am.

What was your first job in this field? Developing and running predictive NOx emissions from large power stations' computer models. I then developed environmental assurance services and audits before the advent of BS 7750/ISO 14001 at Lloyd's Register.

What does your current role involve? I am lucky – I combine a role in which I am sometimes a volunteer and sometimes paid. As a volunteer I work with people such as: the team at Zyba Ltd on a novel approach to harnessing waves in support of coral regrowth (CCell); the team at BSI in relation to chairing sustainable development as well as conformity assessment standards; the team at Verra (Verified Carbon Standard), specifically the Board and finance committee; or the IMarEST team attending IMO Marine Environmental Protection Committee meetings. I also act as BSI/UK expert for ISO GHG standards and EMS, and am a consultant in relation to climate and other environmental issues.

How has your role changed/progressed over the past few years? I chose to move on to the 'third age' of my career in 2013, which involves more freedom – but also challenges, such as where to focus my activities in order to keep excited and engaged for the next 20-plus years. Prior to that I was Lloyd's Register's marine environmental advisor, a rewarding and exciting



CAREER PROFILE

Anne-Marie Warris FIEMA CEnv

Director, ecoreflect

role which included supporting setting up the Sustainable Shipping Initiative, and working with IMO experts on the Market-Based Measures Expert Group in 2010 and LR Marine clients. During the past nine years I had the pleasure of chairing ISO/TC 207/SC 1 and supporting the committee as it revised ISO 14001 and added additional standards, such as ISO 14008, ISO 14002 and ISO 14009.

What's the best part of your work? The need to change and grow.

What's the hardest part of your job? The challenge of finding my next focus and knowing whether it is the right track for me. My aim is to work with people, tackle contemporary issues and do something that I enjoy (it can be challenging!).

What was the last development event you attended? The last face-to-face event was LR Foundation International Conference, but I tend to do more MOOCs and IEMA webinars as they are virtual.

What is/are the most important skill(s) for your job? Having the right attitude. I am known for being enthusiastic, energetic and committed, and for being prepared to go the extra mile. People tell me that my strengths are imagination, my capacity to innovate, and my ability to drive delivery



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

while engaging with, supporting and motivating people.

Where do you see the profession going?

Away from being a niche role and towards being mainstream, as exemplified by the increase in CSO board roles.

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

Having lots of fun and satisfaction while working and learning. Having what Charles Handy called a 'portfolio career'.

What advice would you give to someone entering the profession?

Be flexible, and stay up to date with changes outside of environment and sustainability so you understand how they may impact you.

How do you use the IEMA Skills Map?

It is a great reminder of where I need to focus – on communications or resilience, for example.



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

Committed, enthusiastic and supportive (especially during a crisis).

What would be your personal motto? Look for opportunities and focus on being less serious.

Greatest risk you have ever taken?

Emotionally, my tandem sky dive for the MIND charity – it was exhilarating and completely out of the box. Professionally, presenting the RAEng lecture on low carbon futures in 2010, and deciding to leave full-time employment in 2013 to support the build of our energy-efficient house and set up a portfolio career.

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

A wide-ranging dinner conversation with Ada Lovelace, Leonardo da Vinci, Jacques Cousteau, Rachel Carson, Archimedes and Mary Jackson would be amazing. [¶]

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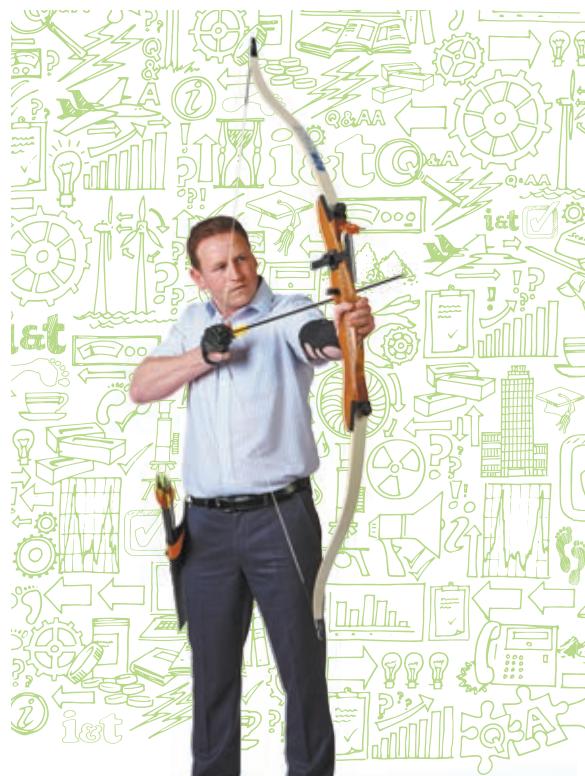
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DATES

Training dates

IEMA CERTIFIED FOUNDATION CERTIFICATE IN ENVIRONMENTAL MANAGEMENT

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
Throughout the year	Alcumus HSE Ltd	E-learning
17/9/18	Astutis Ltd	Warrington
8/10/18	Astutis Ltd	Cardiff
8/10/18	Astutis Ltd	Kensington
15/10/18	Astutis Ltd	Wakefield
22/10/18	Astutis Ltd	Heathrow
17/12/18	Astutis Ltd	Warrington
Throughout the year	British Safety Council (BSC)	E-learning
10/9/18	British Safety Council (BSC)	London
24/9/18	British Safety Council (BSC)	Manchester
29/10/18	British Safety Council (BSC)	Birmingham
3/12/18	British Safety Council (BSC)	London
3/12/18	British Safety Council (BSC)	Manchester
8/10/18	EEF Ltd	Leamington Spa
22/10/18	EEF Ltd	Sheffield
26/11/18	EEF Ltd	Birmingham
1/10/18	KeyOstas	Bromsgrove
3/9/18	Mabbett and Associates Ltd	Belfast
1/10/18	Mabbett and Associates Ltd	Aberdeen
29/10/18	Mabbett and Associates Ltd	Edinburgh
3/12/18	Mabbett and Associates Ltd	Belfast
3/12/18	Mabbett and Associates Ltd	Inverness
5/11/18	Pivotal Scotland Ltd	Glasgow
10/12/18	Pivotal Scotland Ltd	County Durham
Throughout the year	RRC International	E-learning
24/9/18	RRC International	London
29/10/18	RRC International	London
3/12/18	RRC International	Glasgow

IEMA APPROVED ENVIRONMENTAL GOOD PRACTICE ON SITE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
12/12/18	CIRIA	Cardiff

IEMA CERTIFIED CERTIFICATE IN ENVIRONMENTAL MANAGEMENT

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
10/9/18	Alcumus HSE Ltd	Milton Keynes
1/10/18	Alcumus HSE Ltd	Milton Keynes
15/10/18	Alcumus HSE Ltd	Cardiff
5/11/18	Alcumus HSE Ltd	Cardiff
3/12/18	Alcumus HSE Ltd	Cardiff
3/9/18	Astutis Ltd	Darlington
10/9/18	Astutis Ltd	Heathrow
17/9/18	Astutis Ltd	Cardiff
3/12/18	Astutis Ltd	Warrington
10/12/18	Astutis Ltd	Derby
Throughout the year	Charburn Consulting Ltd	Applied learning
10/9/18	KeyOstas	Bromsgrove

IEMA CERTIFIED ENVIRONMENTAL SUSTAINABILITY SKILLS FOR THE WORKFORCE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
28/9/18	Act Sustainably Ltd	Newport
12/10/18	Act Sustainably Ltd	London
16/11/18	Act Sustainably Ltd	Newport
7/12/18	Act Sustainably Ltd	Nuneaton
6/6/18	Watts Sustainability Ltd	London
17/7/18	Watts Sustainability Ltd	London
25/9/18	Watts Sustainability Ltd	London



Training

IEMA CERTIFIED ENVIRONMENTAL SUSTAINABILITY SKILLS FOR MANAGERS

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
30/10/18	EEF Ltd	Leamington Spa
4/12/18	EEF Ltd	Birmingham
Throughout the year	Envirotrain Training	E-learning
23/10/18	Imvelo Ltd	Newcastle
27/11/18	Imvelo Ltd	Newcastle
18/12/18	Imvelo Ltd	Newcastle
26/9/18	TSP	York
27/9/18	TSP	Birmingham
9/10/18	TSP	Reading
30/10/18	TSP	Birmingham
13/11/18	TSP	Edinburgh
28/11/18	TSP	Birmingham
4/12/18	TSP	York
25/9/18	Watts Sustainability Ltd	London

IEMA CERTIFIED LEADING WITH ENVIRONMENTAL SUSTAINABILITY

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
13/9/18	TSP	Edinburgh
18/9/18	TSP	Birmingham
15/10/18	TSP	Birmingham
17/10/18	TSP	York
13/11/18	TSP	Birmingham
22/11/18	TSP	Reading
3/12/18	TSP	Birmingham
6/12/18	TSP	York

IEMA CERTIFIED MAKING THE TRANSITION TO ISO14001:2015 COURSE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
3/9/18	Act Sustainably Ltd	Nuneaton
8/10/18	Act Sustainably Ltd	London
12/11/18	Act Sustainably Ltd	Newport
3/12/18	Act Sustainably Ltd	Nuneaton
26/11/18	BioLogiQ Solutions	Dublin

IEMA CERTIFIED AUDITING TO ISO 14001:2015

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
18/9/18	ESP Ltd	Wolverhampton
21/9/18	Green Business Centre	Bristol
16/10/18	Green Business Centre	Manchester
08/11/18	Green Business Centre	London
17/10/18	Imvelo Ltd	Newcastle
14/11/18	Imvelo Ltd	Newcastle
5/12/18	Imvelo Ltd	Newcastle
11/9/18	TSP	Manchester
14/9/18	TSP	Birmingham
19/9/18	TSP	London
26/9/18	TSP	York
23/10/18	TSP	Edinburgh
31/10/18	TSP	Birmingham
27/11/18	TSP	York
29/11/18	TSP	Birmingham
11/12/18	TSP	London
12/12/18	TSP	Birmingham

IEMA CERTIFIED LEAD ENVIRONMENTAL AUDITOR COURSE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
3/12/18	Antaris Consulting	Dublin
19/11/18	Aspects International	Bristol
10/9/18	Bywater	Leeds
1/10/18	Bywater	Bristol
29/10/18	Bywater	Greenwich
12/11/18	Bywater	Glasgow
26/11/18	Bywater	Staverton
10/12/18	Bywater	Aberdeen
10/12/18	Bywater	Belfast
5/11/18	ERM CVS	Houston, USA
3/12/18	ERM CVS	London
24/9/18	Green Business Centre	Cardiff
8/10/18	Green Business Centre	London
26/11/18	Green Business Centre	Manchester
10/9/18	IQ Management Systems (IQMS)	North West
17/9/18	IQ Management Systems (IQMS)	South West
26/11/18	IQ Management Systems (IQMS)	South East
10/12/18	IQ Management Systems (IQMS)	Midlands
10/9/18	RRC International	London
17/9/18	RRC International	Aberdeen



IEMA CERTIFIED INTERNAL ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS) AUDITOR COURSE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
25/9/18	Bywater	Manchester
16/10/18	Bywater	Greenwich
20/11/18	Bywater	Coventry
4/12/18	Bywater	Glasgow
18/12/18	Bywater	Cardiff
13/11/18	ESP Ltd	Wolverhampton
11/9/18	Green Business Centre	Bristol
30/10/18	Green Business Centre	London
25/9/18	Mabbett and Associates Ltd	Aberdeen
2/10/18	Mabbett and Associates Ltd	Glasgow
16/10/18	Mabbett and Associates Ltd	Belfast
13/11/18	Mabbett and Associates Ltd	Belfast
20/11/18	Mabbett and Associates Ltd	Edinburgh
Throughout the year	Marsden International (UK) Ltd	E-learning
Throughout the year	WSP UK Ltd	London/Manchester

IEMA CERTIFIED EMS IMPLEMENTATION COURSE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
11/9/18	Aspects International Ltd	Leeds
13/11/18	Aspects International Ltd	Bristol
Throughout the year	WSP UK Ltd	London/Manchester

IEMA APPROVED INTRODUCTION TO ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEMS

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
25/9/18	Bywater	Manchester
16/10/18	Bywater	Greenwich
20/11/18	Bywater	Coventry
4/12/18	Bywater	Glasgow
18/12/18	Bywater	Cardiff

COURSE	COURSE PROVIDER
• MSc Sustainability and Environmental Management	University of Derby Online Learning
	
CONTACT DETAILS	LOCATION
UDOLenquiries@derby.ac.uk +44 (0) 1332 594000	Online
Our online MSc Sustainability and Environmental Management course, accredited by IEMA is designed for environmental professionals seeking career progression in management or consultancy. You'll cover core areas in environmental management and sustainability to learn new skills that can be applied directly in the workplace for immediate impact.	

COURSE	COURSE PROVIDER
• MSc Environmental Management • MSc Water & Environmental Management • MSc Environmental Management for Agriculture	University of Hertfordshire
	
CONTACT DETAILS	LOCATION
admissionsenvman@herts.ac.uk	Hatfield, Hertfordshire, UK
Whether you are a graduate at the start of your career, working in business or an experienced practitioner wishing to expand your knowledge, our MSc courses in Environmental Management (various specialisms available) enable you to develop the knowledge and skills required to be at the forefront of the sector.	

IEMA APPROVED ENVIRONMENTAL AWARENESS

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
20/9/18	EEF Ltd	Sheffield
22/9/18	International HSE Council Ltd	Dubai
13/10/18	International HSE Council Ltd	Dubai
17/11/18	International HSE Council Ltd	Dubai
3/12/18	International HSE Council Ltd	Dubai
17/10/18	RBS Mentor	London

IEMA CERTIFIED CARBON, GHGS, FOOT PRINTING, ACCOUNTING AND MANAGEMENT

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
13/11/18	Terra Firma Academy	Johannesburg, South Africa

IEMA APPROVED INTERNAL AUDITING TRAINING

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
26/9/18	Bywater	Manchester
17/10/18	Bywater	Greenwich
21/11/18	Bywater	Coventry
5/12/18	Bywater	Glasgow
19/12/18	Bywater	Cardiff

IEMA APPROVED ISO 50001:2015 INTERNAL ENERGY MANAGEMENT SYSTEMS AUDITOR COURSE

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
28/11/18	Antaris Consulting	Dublin

Training

COURSE <ul style="list-style-type: none">• Foundations in Public Participation• Three-day Planning for Effective Public Participation• Two-day Techniques for Effective Public Participation	COURSE PROVIDER Essential Planning Ltd, on behalf of the International Association for Public Participation (IAP2)
CONTACT DETAILS: Tanya Burdett, director, Essential Planning Ltd tanyaburdett@essentialplanning.eu	LOCATION University of Westminster, London
Foundations in Public Participation was designed with the input of successful practitioners who work with diverse populations and divergent circumstances throughout the world. Divided into two modules, each focusing on major phases of public participation, planning and techniques, participants receive a certificate of completion from IAP2 for attendance.	



IEMA APPROVED SUSTAINABLE PROCUREMENT

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
18/10/18	Green Business Centre	Manchester

IEMA APPROVED INTRODUCTION TO ENVIRONMENTAL LEGISLATION

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
17/10/18	Green Business Centre	Manchester
7/11/18	Green Business Centre	London

IEMA APPROVED PLANNING FOR EFFECTIVE PUBLIC PARTICIPATION

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
17/10/18	Essential Planning Ltd	Manchester
07/11/18	Essential Planning Ltd	London

IEMA APPROVED HEALTH IN IMPACT ASSESSMENT

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
Courses are held upon request	Ben Cave Associates	Various, UK

IEMA APPROVED GRI CERTIFIED TRAINING – SUSTAINABILITY REPORTING

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
20/9/18	Total Eco Management Ltd	London, Various UK
04/10/18	Total Eco Management Ltd	London, Various UK
22/11/18	Total Eco Management Ltd	London, Various UK
13/12/18	Total Eco Management Ltd	London, Various UK

IEMA APPROVED ENVIRONMENTAL MANAGEMENT IN CONSTRUCTION

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
4/9/18	Act Sustainably	Nuneaton
9/10/18	Act Sustainably	London
13/11/18	Act Sustainably	Newport
4/12/18	Act Sustainably	Nuneaton

IEMA APPROVED GRI STANDARDS CERTIFIED TRAINING

COURSE START DATE	IEMA TRAINING PARTNER	LOCATION
6/9/18	FBRH Consultants Ltd	London
4/10/18	FBRH Consultants Ltd	London
1/11/18	FBRH Consultants Ltd	London
6/12/18	FBRH Consultants Ltd	London

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Kimberley Lasi, Environment Officer | IEMA Diploma

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IEMA Annual General Meeting 2018

Company Name: The Institute of Environmental Management and Assessment
Company Number: 03690916

NOTICE IS HEREBY GIVEN that the 18th Annual General Meeting of the Institute of Environmental Management and Assessment ("IEMA") will be held at 17:30hrs on Wednesday 12th September 2018 at The Good Hotel London, Western Gateway, Royal Victoria Dock, London, E16 1FA.

Ordinary Business:

1. To confirm the Minutes of the previous Meeting which was held on 20th September 2017
2. To confirm the recently appointed Non-Executive Directors of IEMA
 - Louise Nicholls
 - Richard Carter
 - Safia Iman
3. To reconfirm Ian Bamford as a Non-Executive Director of the Institute
4. To receive and accept the Directors' Report and Accounts of the Institute for the financial year ending 31st December 2017
5. To appoint hayesmacintyre as Auditors of IEMA until the conclusion of the next general meeting at which accounts are laid
6. To authorise the Board to fix the remuneration of the Auditors

Martin Baxter
Company Secretary

Notes

Any Member will be entitled to speak on any matters arising out of the Directors' Report and Accounts, but no other business other than that given in the notice will be transacted at the meeting.

Every Member entitled to attend and vote at the meeting is entitled to appoint a proxy or proxies to attend and, on a poll, vote on his/ her behalf. A proxy must be a Member of IEMA. A template form for submitting proxy votes can be found on the IEMA Website www.iema.net/agm2018 and shows all the information that is required by IEMA in this circumstance. Completion and return of a form of proxy will not prevent a Member from attending and voting at the meeting in person should he/ she wish to do so. All proxies so appointed should be notified in writing, by no later than noon on Tuesday 11th September 2018, to the following name and address: Governance Officer, IEMA, City Office Park, Tritton Road, Lincoln, LN6 7AS, United Kingdom.



If undelivered please return to:
IEMA, City Office Park,
Tritton Road, Lincoln, LN6 7AS.



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