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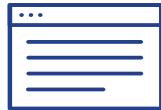
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Contents

DEC/JAN 2022-23

Upfront

04 Comment

Sarah Mukherjee reflects on our recent Connect 2022 event

05 Industry news roundup

06 IEMA news

All the latest news and updates

08 IEMA Opinion

While climate pessimism may be valid, it's no reason to give up, says Tom Pashby

09 IEMA Futures

Net zero will require both infrastructure and behavioural change, says Natasha Worrall

Regulars

12 Legal brief

Regulations, consultations and court news

Connect

34 Member profile

Becky Toal, MIEMA CEnv, managing director, Crowberry Consulting Ltd

35 Events

Web exclusive

Wobbly foundations: Taking a nested approach to sustainability

Georgiana Allison imagines a different way of thinking about sustainable development

bit.ly/Nested-approach



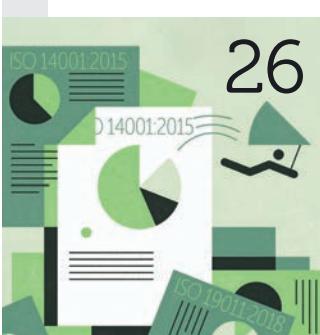
14



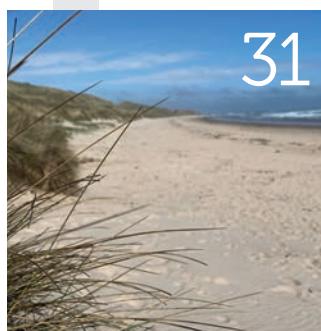
20



23



26



31

FEATURES

14 Interview: Myles Allen

The director of the Oxford Net-Zero Initiative explains why he thinks carbon capture and storage needs to play a role in decarbonising the global economy

18 Transport

Rick Gould discusses a new ISO standard designed to help reduce greenhouse gas emissions within the freight sector

20 Politics

Global conflicts and military organisations are responsible for a significant amount of hidden climate damage, says Huw Morris

23 IEMA Survey

Chris Seekings shares some of the findings from the IEMA Membership Survey 2022, shining a light on issues from diversification to salaries

26 Sustainability

Environmental auditors need to be able to zoom out and see the bigger picture, say Richard Gotheridge and Nigel Leehane

28 Business and industry

David Burrows examines the problems afflicting lifecycle assessment, and the way some organisations are misusing results

31 Energy

With two major new UK energy links having been given the green light, Ed Walker looks at how they will be installed

SARAH MUKHERJEE MBE, CEO, IEMA

Connecting the profession

Hello, and welcome to another edition of *Transform*. It was lovely to see so many of you at our recent online Connect 2022 Conference. With nearly 3,000 registrations and members joining from across the globe, it really felt like a combination of a seminar, a networking event and a celebration! We've been overwhelmed by the positive feedback you've been giving us about the content and range of the sessions on offer, and the team will be taking that away to reflect on as we plan for next year. Please do continue to let us know what you thought about the conference through our feedback forms; there's a further write-up of the events in this month's edition.

As the nights draw in for the northern hemisphere, many millions of individuals and businesses are making tough decisions about energy usage. The current geopolitical situation is exacerbating energy supplies in many countries. Ed Walker considers a new project aimed at delivering green energy across the UK.

We looked ahead to COP27 in our last edition, and, as delegates met in Sharm El Sheikh, there was much discussion of net zero – or how the globe can dramatically reduce the amount of carbon we put into the atmosphere. Myles Allen is a world-renowned physicist who has been described as the person behind net zero; he speaks to us about carbon capture and storage, and how to move quickly towards a zero-carbon planet without putting the burden on taxpayers.

According to the International Chamber of Shipping, container ships transport more than 11bn tonnes of goods across the world's oceans and seas each year – equivalent to 1.5 tonnes of goods per person. And yet measuring the impact of all this global trade has sometimes been difficult. Rick Gould investigates a new ISO standard aimed at calculating greenhouse gas emissions in the freight sector.

Have a great and productive couple of months, and may I take the opportunity to wish you a happy Christmas, Hanukah, Maghi or whichever festival you celebrate at this time, and send my and the IEMA team's best wishes for a peaceful and prosperous new year.

"Many millions of individuals and businesses are making tough decisions about energy usage"



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ROUNDUP

ENVIRONMENT &
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NEWS AND VIEWS



WASTE MANAGEMENT

Corporates set to miss plastic recycling and reuse goals

Major companies are set to fail on their pledges to only use reusable, recyclable or compostable plastic packaging by 2025 due to rises in flexible packaging such as sachets and film, according to latest research.

The Ellen MacArthur Foundation study, *The Global Commitment 2022 Progress Report*, looked at the progress of more than 80 signatories to its New Plastics Economy Global Commitment, which was launched in 2018 to create a 'new normal' by eliminating single-use packaging materials, increasing the amount of reused or recycled plastics in new products, and innovating to ensure 100% of plastic packaging can be reused, recycled or composted by 2025.

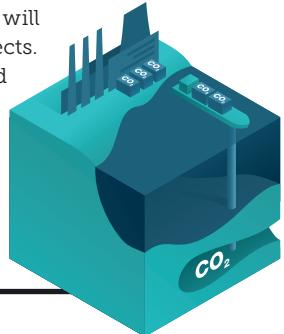
An increase in flexible packaging and a lack of investment in collection and recycling infrastructure means these commitments are unlikely to be met, according to the research. While 59% of brands have reduced their virgin plastic use, a 2.5% rise in plastics was recorded, with 42% yet to introduce any reuse models.

POLLUTION

McKinsey urges massive scale-up in carbon capture technology

Carbon capture, utilisation and storage (CCUS) technologies must grow by 120 times by 2050 for countries to meet their net-zero commitments, according to McKinsey. Its study *Scaling the CCUS industry to achieve net-zero emissions* says that these technologies must reach at least 4.2 gigatons of carbon captured per year, with some estimates putting the figure at six–10 gigatons per year. This could lead to CCUS decarbonising 45% of remaining emissions in the industry sector. Even under conservative scenarios, CCUS will need to increase 60-fold on today's pipeline of projects.

McKinsey says the CCUS industry has "struggled to find its footing" in the past 30 years, warning that its success and scaling-up are not guaranteed. It adds that the policy landscape is not encouraging in most markets, with a need for more direct and indirect incentives as well as targeted regulations.



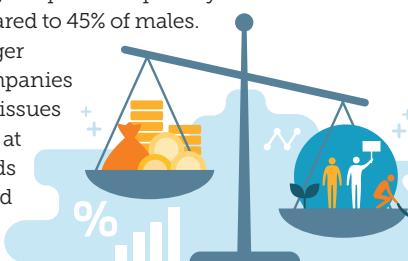
BUSINESS AND INDUSTRY

Directors struggle on environment

More than half of directors of major companies fail to see a link between environmental, social and governance (ESG) issues and the bottom line, according to a survey of over 700 directors. PwC's survey *Charting the course through a changing governance landscape* reveals 45% of directors believe ESG impacts company performance, while 11% think environmental or sustainability expertise is very important for boards.

The survey shows they are confident in understanding traditional areas of ESG oversight, such as talent and culture, diversity and inclusion, data privacy and cybersecurity, with scores of around 90%. They are less so in emerging areas such as climate risk, with fewer than two thirds saying their boards understand their companies' climate strategy, while only 56% understand their firm's carbon emissions. Two thirds of female directors (66%) say reducing climate change impacts is a priority even if it impacts short-term performance, compared to 45% of males.

Smaller companies are behind their bigger counterparts; while 73% of directors at companies with US\$10bn or more in revenue see ESG issues as linked to their strategies, this is just 40% at firms with under US\$1bn, and 72% of boards at US\$10bn-plus companies have discussed climate change, dropping to 27% at those with less than US\$1bn.



NET ZERO

IEMA submits evidence to the Skidmore Review



IEMA has responded to the Skidmore Review of Net Zero: call for evidence, calling for greater clarity and certainty in policy direction. The review's remit is to ensure that delivering net zero does not place undue burdens on businesses or consumers. It invited submissions on the challenges and opportunities that organisations face in the transition.

The key barrier, according to IEMA members, was inconsistent government messaging, with policies repeatedly delayed or withdrawn. The costs of infrastructure for the transition were also raised, with some members finding it hard to make a business case for investment in the face of uncertain regulatory requirements.

Members called for mandatory transition plans and for organisations to be required to implement energy efficiency recommendations. This would enable climate teams to put forward successful business cases for investment in decarbonisation. There were also calls for faster changes to building regulations, with members arguing that it is more efficient to build right first time rather than retrofit later.

Clear signals are sought from central government on the direction and pace of travel, together with a commitment to invest in the green skills required to pool and consolidate talent in the UK. The response also places an emphasis on export opportunities, building on the UK's record of leading on technological development. The transition presents internationally significant opportunities for the UK economy.

Download the IEMA response at iema.net/document-download/254116

WASTE MANAGEMENT

Resource productivity proposals

The Environment Act 2021 requires the government to set at least one long-term target in four areas: air quality, biodiversity, water quality and waste. These are to support delivery of other government priorities, including the Resources and Waste Strategy. IEMA submitted a response to the government's consultation on the targets, which can be downloaded at bit.ly/DefraTargets

A resource productivity target will be set, and the government has proposed measuring this based on GDP-to-raw material consumption. This is an opportunity to support the circular economy. The government has recognised the challenges and has decided to set this target later to give it time to seek views through a focused consultation.

IEMA produced an engagement programme for exploring different mechanisms. Webinars were

held with member speakers, who explored subjects from environmental economics to redefining productivity. We heard about the limitations of the GDP-based approach, the fact that considered decisions are needed for financial and non-financial benefits, and how economic and impact frameworks can reduce business risk and resource dependency. A workshop was held with case study presentations from more members and experts. This focused on examples and recommendations for policy levers required to deliver an alternative resource productivity target.

The outcome will be a policy recommendations paper to support the government's development of the target, published this autumn.



CAREERS

Green Careers Hub launched

At IEMA Connect 2022 we launched the first stage of our Green Careers Hub, an exciting new project with lots more content to come next year.

After receiving regular feedback from our members on the lack of clarity in defining a green job or progression pathways in the sector, we decided to build a solution: a platform where anybody, from any sector or background, can go to understand how they can play a role in the wider green economy.

The website currently includes our intent and vision, as well as information on green skills and the UK green landscape. We also reference our plans to add more interactive content in 2023, including careers advice, job profiles and case studies to tell the story and showcase the importance and variety of green roles.

At the Connect 2022 session we discussed the importance of green skills, our vision for all jobs to be greener, and what we plan to develop as part of the Green Careers Hub. If you missed the launch session, you can catch up at bit.ly/Intro_GreenHub

Explore the IEMA Green Careers Hub, including the chance to join our mailing list for the latest news as we continue to develop the website ready for next year, at greencareershub.com

We hope you are as excited about this project as we are. If you have any questions, please direct them to info@greencareershub.com

IEMA Connect 2022 – A roaring success



Chris Seekings reports back on this year's member conference programme

IEMA members have described this year's IEMA Connect 2022, which was packed full of engaging sessions and speakers, as "interesting", "excellent", "compelling" and "fantastic".

The week-long conference saw a wide range of experts come together for hard-hitting keynotes and panel discussions on net zero, climate change, embedding green skills and more, with thousands of IEMA members also taking the opportunity to expand their global network of contacts and continuing professional development.

IEMA members' central role

Kicking off proceedings was COP26 president Alok Sharma, who spoke of the "central role" that sustainability professionals play in "keeping 1.5°C alive", before describing the lead-up to COP27 as a "critical moment" to "redouble our efforts" in tackling the climate crisis.

In a rallying speech, he said: "Friends, the case for action is immense. The cost of inaction would be catastrophic. The choice is clear. Let's all redouble our efforts and recommit to making the right choice for the planet and for future generations in everything you and your businesses do."

"Skilled climate, environment and sustainability professionals like those across the IEMA membership, many of whom are at the vanguard of the green skills revolution, will have a central role to play in keeping 1.5°C alive."



"Environment and sustainability professionals will have a central role to play in keeping 1.5°C alive"

A packed schedule

Given the vast array of speakers and topics, it's impossible to single out just one highlight from the conference.

However, with COP27 taking place in Sharm El Sheikh a couple of weeks later, it was particularly enlightening to attend a session on the sustainability challenges facing Africa, with speakers from Sierra Leone, Nigeria and Ghana discussing the unique issues facing the continent.

The Future Generations Commissioner for Wales, Sophie Howe, called for Universal Basic Income to improve life chances for young people, and several experts shared their insights on starting a career in sustainability.

Another feature of this year's conference was the #IEMACHampions campaign, which saw IEMA members nominate any person or organisation that is going above and beyond for sustainability and the environment. The huge interaction on social media was a testament to the great work that so many are doing.

IEMA also made several important announcements during the week, including the launch of its Green Careers Hub (greencareerhub.com) – a new platform where anybody, from any sector or background, can go to understand how they can play a role in greening the economy. It also launched its *Guidance on Sustainability for NHS Non-Executive Directors* (bit.ly/Guidance_NHS_NEDs) and a new policy briefing on COP27 (bit.ly/COP27_briefing), giving members an overview of what to expect at the climate summit in Egypt.

Showcasing knowledge

As the curtain closed on IEMA Connect 2022, CEO Sarah Mukherjee MBE spoke of the encouragement she felt at seeing so many members networking together, and the honour of attracting such a wide range of experts speaking on major topics from around the world.

"Something I will personally take from Connect 2022 is the vast variety of areas of work that are represented by our members and speakers, and of course the level of skill and knowledge showcased – evidence of the crucial role that you all play," she said.

"We are already looking ahead to next year, so make sure to watch this space for more information, and the chance to join us again for an unmissable event."

IEMA members can watch sessions on demand at bit.ly/3gLjb1L

COP27 shouldn't have existed. Climate scientists were raising the alarm on the climate emergency, then called global warming or climate change, back in the 1970s and 1980s. The climate and wider environmental summits of the 1990s and 2000s should have been enough to put the world on track to sustainability.

Humanity is way off course from a sustainable future. The reactions to this lie along a scale from optimism to pessimism. That tension between hope and doom is present in the overarching narrative of the UN Framework Convention on Climate Change (UNFCCC) negotiations, which are underway in Sharm El Sheikh, Egypt as I write this column.

UNFCCC talks are incremental by design, built on fundamental principles of co-operation and consensus building. If there is not overall global consensus, progress is difficult or impossible. That incrementalism stands in contrast to the urgency of action on the climate emergency, which UN secretary general António Guterres regularly highlights, calling it a "code red" for humanity.

This urgency has been obvious within the climate movement for decades, and it is a normal human response to treat it with optimism or pessimism. Many I speak to in the climate movement are publicly neutral or optimistic, but privately devastated. That personal devastation is sometimes made public in the form of direct action such as the protests we have seen recently from groups such as Just Stop Oil, Green New Deal Rising and Greenpeace.

Some people are so upset by the situation that, despite being activists or otherwise involved in the climate movement, they disengage from the news. The saying "no news is good news" rings true for many.



TOM PASHBY: IEMA DIGITAL JOURNALIST

Tom Pashby reflects on the feelings of pessimism experienced by many within the climate movement

Greta Thunberg, the now 19-year-old climate activist who started the Fridays for Future and school strikes movement, recently spoke in London at a literary event. When asked about hope and gloom, she said "despair is a privilege". She was referring to the fact that many environmentalists, despite feeling the distress associated with awareness of the climate emergency, aren't themselves experiencing the physical impact of the climate emergency, such as floods, drought and other forms of extreme weather that can destroy people's homes and livelihoods. The people experiencing the impacts of the climate emergency, mainly in the Global South and living in absolute poverty, have to stay engaged with it because it's their reality and a matter of survival.

However, while what Thunberg said about despair



and privilege is true, this doesn't make despair, eco-anxiety or eco-grief any less legitimate or valid. I live with depression and anxiety, and the climate and ecological crises definitely makes my mental health worse. When I read the Intergovernmental Panel on Climate Change's special report on 1.5°C of global warming in 2018, I felt massive anxiety and grief – grief at a lost future for all of us.

I would guess that anyone reading this who has been involved with the climate movement for more than a few months feels similarly, or at least recognises a lot of these feelings, either in themselves or among friends or colleagues. I have a permanent case of pessimism, but that doesn't mean I think

we should give up.

I think people who are pessimistic are worried about being honest about it, in case it turns potential climate movement converts away. That is a risk, but I think it's worth us having this conversation with ourselves – especially so we can all come to terms with the impact that this work has on our mental health.

COP27 plays a critical role in focusing media and political attention on the climate emergency. COPs are not a suitable arena for action on an emergency, which is what the climate crisis is, but I believe it is better that they take place than not at all, given that they can act as springboards for action outside of the negotiations – from the grassroots, through the corporations, and to unilateral and multilateral government actions. [⑩](#)

"I think people who are pessimistic are worried about being honest about it, in case it turns potential converts away"

Hand in hand

For the UK to reach net-zero, a balance must be struck between infrastructure and behaviour change, says **Natasha Worrall**

Transport keeps our society moving, but is the UK's largest emitter of greenhouse gases. In 2021, passengers in the UK travelled 580bn kilometres, 77% of domestic freight was moved by road, and road transport added 115m tonnes of carbon dioxide to the atmosphere.

The COVID-19 pandemic presented a unique opportunity to build back better. In 2020, walking and cycling levels were radically increased in the short term, with distances travelled on foot increasing by 7% and on bike by 46%, while road traffic dropped by 60%.

Government response

In 2021, responding to the changes seen during the pandemic, the government prepared its Net Zero Strategy to guide the UK to its target of reaching net zero by 2050. The strategy sets out transport-related policies and investment packages that aim to accelerate the shift to electric vehicles, increase public transport use, encourage cycling and walking, and electrify railway lines. Additionally, the House of Lords advised that, to meet the target, we must implement the lessons learnt from the modal shift enabled by pandemic behavioural change.

Public transport

However, the pandemic also set back some of the progress that had been

made in public transport, as commuters avoided buses and trains in favour of either working from home or using a private car. In 2022, road traffic levels returned to pre-pandemic levels; in some areas, they are even higher. There are several different reasons for this, including people returning to the office, the removal of COVID-19 travel measures such as pop-up bike lanes, vulnerable people's preference for using private cars, and loss of confidence in using public transport.

So how do we reap the benefits of the shift we saw in 2020 on a larger scale? The answer is a whole raft of different solutions, from behavioural change and improving public transport's attractiveness to large-scale infrastructure interventions.

"Without infrastructure, the modal shift cannot be achieved – but without behavioural change, the infrastructure will not be used"



Transport solutions

Transport infrastructure can include new road and rail links, dedicated cycle routes, bus prioritisation measures and the repurposing of existing infrastructure. However, new infrastructure involves embodied carbon, is costly, and can take many years to gain planning approval and be constructed.

Softer measures can include cheaper transport fares, behavioural change campaigns, permanent bus lanes, bus priority measures, improved public transport frequency and dependability, attractive travel facilities, wider pavements, public realm improvements and pedestrianisation of urban areas. However, these softer measures can be politically unfavourable, publicly unpopular and hard to implement in areas where space is constrained.

Globally, cities are responding in different ways. Paris has implemented 50km of new cycle lanes, Germany has temporarily introduced a €9 travel pass and Bristol has pedestrianised parts of the city. It is important to share and learn from these lessons, noting that political, economic, social and environmental drivers shape transport solutions.

Without infrastructure, the modal shift cannot be achieved – but without behavioural change, the infrastructure will not be used. A balance needs to be struck to allow us to reach our net-zero target. The pandemic gave us the opportunity to reshape our entire transport system for all users. Let's harness the solutions to do just that. T

NATASHA WORRALL, PIEMA, is an assistant project manager at the West of England Combined Authority and an IEMA Futures Steering Group member.

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IEMA at COP27

Members made an impact at this year's climate summit, says **Chris Seekings**

IEMA certainly made its presence felt at this year's COP27, with members and representatives taking part in a wide range of events and networking meetings over the two weeks in Sharm El Sheikh.

Deputy CEO Martin Baxter was flying the flag for IEMA during the first week when he spoke about the need for all jobs to become 'greener' at a number of Blue and Green zone events. "There's an awful lot of fear and anxiety from people out there, and we need to demonstrate how, through the world of work, we can be part of a cleaner, greener future, and part of the solution to the challenges," he said at an event streamed to hundreds of viewers from across the world.

He was later joined by professor Ali Hassan FIEMA and post-graduate student Rania Fawzan, both from Ain Shams University – a new IEMA corporate partner – for a separate event titled All jobs greener: Career pathways for those in education and in work.

"We were the first postgraduate institute in Egypt and the whole region with the particular interest in environment and sustainability," said Hassan. "I'm focusing on the role of tertiary education and looking at how we can build ourselves and change ourselves so we can contribute to the transition to a sustainable society."

Baxter highlighted the educational products that IEMA offers to people who are thinking of entering the



environment and sustainability profession, as well as everyone already in the sector, from new graduates to established leaders.

IEMA digital journalist Tom Pashby was also in attendance during the first week of the summit, speaking with a wide range of IEMA members from various backgrounds. Laura Young, an IEMA member and PhD researcher in nature-based solutions from the University of Aberdeen and University of Dundee, summed up the mood when she told Pashby that she was feeling a mixture of optimism and apprehension. However, she added: "We need to be positive about this because I'm a true believer in more action comes from optimism than pessimism."

To mark Adaptation and Agriculture Day at COP27, IEMA also published new guidance on adaptation during the summit's first week. It aims to provide a forward-looking approach to the key adaptation issues over the next two to three years in the UK and beyond.

"This guide gives IEMA members a comprehensive framework to develop and lead

robust and comprehensive adaptation approaches, whatever their context, as practitioners or as leaders," said IEMA CEO Sarah Mukherjee MBE at the launch of the guidance. "I look forward to seeing the more climate-resilient world that emerges because of what members achieve with it."

Mukherjee also took part in a Blue Zone event highlighting the importance of green skills in delivering real change – a message that IEMA reiterated strongly throughout COP27.

As expected, the issue of loss and damage was front and centre during the summit, with Mukherjee stressing that we need a "pathway forward for all countries to have access to the investment that is required to decarbonise."

Some will leave Egypt with feelings of regret; others will be more satisfied with the announcements made. Regardless, IEMA is well placed to support the delivery of the high-level measures agreed at the summit, and will once again be offering its knowledge and expertise at COP28 in the UAE next year.

Visit IEMA's COP27 page for more: iema.net/cop27



IN COURT

Anglian Water fined for pollution incidents

Anglian Water has been fined £1,221,000 following two court cases relating to pollution incidents that occurred in 2019.

The first case related to a series of pollution incidents across Cambridgeshire, Buckinghamshire and Northamptonshire between May and September 2019. Several process failures led to the incidents, including reporting delays, faulty screening and a breakdown in planning and maintenance that led to blockages and pollution; one pollution incident resulted in dead aquatic invertebrates for 1,500m.

One incident occurred because of a build-up of items that should not be flushed, such as cotton buds and sanitary pads. However, the build-up remained unchecked, which led to a discharge of sludge into treated sewage.

These incidents resulted in a fine of £871,000 and an order to pay costs of £37,605.13.

A separate court case against the water company took place due to a pollution incident in September 2019, which happened when a pumped sewer in Cambridgeshire burst for the sixth time since 2004. As a result, water measurements showed ammonia and low oxygen levels, posing a risk to wildlife. Although Anglian Water attempted to stop the polluted water from spreading, the methods it used weren't sufficient and 4km of the watercourse became polluted for at least five days.

Cambridge Magistrates Court found that Anglian Water had been too slow in implementing mitigation measures, considering the frequency at which the sewer had burst.

Anglian Water pleaded guilty to causing poisonous, noxious or polluting matter to enter inland freshwaters without an environmental permit, resulting in a fine of £350,000, costs of £28,025.66 and an order to pay a victim surcharge of £181.



CASE LAW

Landmark case against the Environment Agency

The claimants in *Harris v Environment Agency* applied for judicial review of the Agency's refusal to expand the scope of an investigation into the effect of groundwater abstraction from wetland sites across the Norfolk Broads.

The Agency was responsible for the grant, variation and revocation of licences for groundwater abstraction for agricultural and other purposes. The claimants, who lived on the Norfolk Broads, were concerned that abstraction was causing irreparable damage to the environment, including legally protected ecosystems.

The Norfolk Broads include a Special Area of Conservation (SAC) and a Special Protection Area for birds, both made up of Sites of Special Scientific Interest (SSSIs). These were designated as European sites and protected under the EU's 1992 Habitats Directive.

In 1994 the Agency had to review all abstraction licences granted before 30 October 1994 that were likely to have a significant effect on any European site. It then established a renewals statement with Natural England to allow it to indicate concerns about particular licence renewals. In 1999 it started restoring sustainable abstraction to investigate and resolve environmental damage caused by unsustainable water abstraction. Around 500 sites, mostly SSSIs, were identified as being at risk. The programme was closed to new sites in 2012.



and the Agency initiated a new investigation to consider the effect of 240 abstraction licences, which it decided to limit to three SSSIs in the SAC.

The claimants said the Agency had breached its obligation under Article 6 of the Habitats Directive to avoid deterioration of protected habitats and disturbance of protected species in SACs. They said that this was because it had been required to consider the impact of licences across the entire SAC and address potential risks to other sites, and that it was irrational not to allow more expansive investigation.

In this context, it was concluded that the Agency was effectively the sole public body responsible for determining whether abstraction licences should be granted, varied or revoked. If it did not secure the Habitats Directive's requirements regarding those decisions, no other public body could fill the gap. This meant the Agency had to take the requirements of the Habitats Directive into account and discharge them.

The court also ruled on whether the Habitats Directive was enforceable by a UK court, seeing as it was implemented by the EU's Conservation of Habitats and Species Regulations 2017. The court concluded that it was, and had to be enforced accordingly.



NEWREGULATIONS

THE LATEST

■ LEGISLATION ■ GUIDANCE ■ CONSULTATION



LEGISLATION

Retained law

The government has published the Retained EU Law (Revocation and Reform) Bill, removing the 'special status' given to EU law retained after Brexit. The aim is to enable this law to be replaced more easily with domestic legislation. Under the Bill, all law derived from the UK's EU membership must be reviewed and either transferred into UK law or scrapped by the end of 2023. Retained EU law comprises EU Regulations and Decisions that applied directly into UK law and were adopted into the UK Statute Book on 31 December 2021. It also includes legislation implementing EU Directives, meaning virtually all environmental legislation could be affected.

☞ cedr.ec/8kq



CONSULTATION

Chemicals

The European Commission (EC) has consulted on draft Regulation that would introduce new specified hazard classes as part of its revision to Regulation (EC) 1272/2008 on classification, labelling and packaging of substances and mixtures. It introduces hazard classes covering substances with the properties: human health and environmental endocrine disruptors; persistent, bio-accumulative and toxic; very persistent and very bio-accumulative; persistent, mobile and toxic; and very persistent and very mobile substances.

☞ cedr.ec/8ks



CONSULTATION

Water

Defra has consulted on mandatory water efficiency labelling. A 2021 Written Ministerial Statement on reducing water demand included an action to "make regulations to introduce a mandatory water efficiency label to inform consumers and to encourage the purchase of more water-efficient products for both domestic and business use". This consultation aims to introduce such legislation under the Environment Act 2021.

☞ cedr.ec/8kx



GUIDANCE

Pollution

The EC has proposed stricter rules on ambient air, surface and groundwater pollution, as well as extra measures to improve urban wastewater treatment. It plans to tighten standards on the most dangerous water and air pollutants, including reducing fine particulate matter presence in the air and increasing control of hazardous substances in water, such as forever chemicals and other toxic or harmful substances such as pesticides and antibiotics.

☞ cedr.ec/8kr



GUIDANCE

Packaging

The Environment Agency has produced a regulatory position statement on the registration of small packaging producers.

☞ cedr.ec/8ku

It applies to those who calculate their recovery and recycling obligations using the allocation method; when you cannot meet your obligations as a small producer under this method, the Agency will not normally take enforcement action as long as you comply with its requirements.

☞ cedr.ec/8kw



GUIDANCE

Net zero

The Secretary of State for Business, Energy and Industrial Strategy has commissioned a review of the government's approach to its net-zero target to ensure it is pro-business and pro-growth. Russia's invasion of Ukraine and other factors have changed the UK economic landscape, and the review will ensure that delivering the target does not place undue burdens on businesses or consumers.

☞ cedr.ec/8kt



GUIDANCE

Deposit return

The Scottish Environment Protection Agency has published guidance to ensure drinks producers are ready when registration for Scotland's Deposit Return Scheme opens in January 2023. It brings together resources to help producers understand if their drinks are covered by the scheme and the steps they need to take, as well as understand their obligations. It also sets out the steps producers need to take to register.

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Simple but controversial

Myles Allen, director of the Oxford Net Zero initiative, talks to Chris Seekings about the best way to decarbonise the world's economy by 2050

Called "the physicist behind net zero" by the BBC, professor Myles Allen has played a key role in determining what is needed for humans to avert the worst impacts of climate change. He was instrumental in dismantling ideas of 'safe levels' of greenhouse gas concentrations, which dominated climate science and policy for a quarter-century prior to 2009, and also contributed extensively to the Intergovernmental Panel on Climate Change.

However, despite the fact that more and more countries and companies are committing to net zero, it has become an increasingly complicated and slippery concept during the past 15 years, much to Allen's exasperation.

The science, he says, is simple: to limit peak warming, we must limit the total amount of carbon dioxide (CO_2) we release, which means reducing ongoing emissions to net zero. However, the more net-zero goals have been adopted, the more vested interests have sought to redefine it and the best way of getting there. Allen says it is "obvious" we will generate more CO_2 by burning fossil fuels than we can afford to dump, "so net zero means we need to stop fossil fuels from causing global warming before the world stops using them".

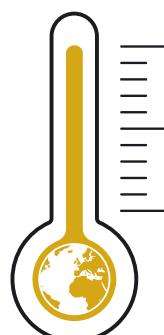
A waste disposal problem

It is easy to imagine the enemies Allen might have made when he published his first net-zero papers in 2009.

However, he says it was "striking" how quickly people embraced the concept. "It was faster than I expected, since net zero was a challenging finding for policy. It meant the old model of contraction and convergence didn't work as there was no long-term sustainable rate of emissions for countries to converge upon," he explains. "Yet the need for net zero was, in effect, mentioned in the Paris Agreement six years later, which I think is impressive."

In 2009, Allen explained that the world had already released half of the CO_2 that was consistent with limiting global warming to 2°C above pre-industrial levels. "We are now about a third of the way through the remainder, and have seen 1.25°C or so of warming, increasing at a couple of tenths of a degree per decade," he says. "It's obvious that we will generate more CO_2 by burning fossil fuels than we can afford to dump in the atmosphere, and that's why I focus on the need for large-scale CO_2 disposal."

For many, this is difficult to accept, exemplified by the Just Stop Oil protests that have recently been hitting headlines. For Allen, halting new fossil fuel licensing and production overnight is not going to happen, so other solutions are required. "We need to get rid of CO_2 . At the moment, the only way we get rid of it permanently on any scale is by putting it back underground."



"It's interesting how many people seem to have an extraordinarily vested interest in making this idea go away, and I don't understand it"

The Carbon Takeback Obligation

In 2009, Allen first proposed that carbon capture and storage (CCS) should be made mandatory, and has since advocated for a 'Carbon Takeback Obligation' that would force fossil fuel extractors to clean up after themselves. The proposal would require fossil fuel extractors and importers to permanently store underground a percentage of the CO₂ generated by +the products they sell, with this percentage increasing to 100% during the next few decades.

"We don't need to be at net zero tomorrow, we need to be there by 2050," Allen says. "The logical thing to do is to start by requiring companies to dispose of a small percentage of the CO₂ generated by the products they sell and ramp that up over time. You could impose this as a simple licensing requirement: anyone who wants to sell fossil fuels in a jurisdiction has to get rid of CO₂. If they don't get rid of it themselves, they need a certificate to say that somebody else has got rid of it for them."

If realised, he says, the obligation would create a huge 'CO₂ disposal industry' that would generate the certificates required by fossil fuel providers. Those without a certificate won't be able to sell their product. "These certificates would become valuable, create high demand for CO₂ disposal and develop that industry quickly – without all the cost being borne by the taxpayer."

A study by Oxford Net Zero researchers suggests that a Carbon Takeback Obligation would provide an

"affordable and low-risk route" to net-zero and could "stop fossil fuels from causing global warming within a generation". Allen adds: "For what we're paying for natural gas in Europe, you could capture all the CO₂ it releases into the atmosphere and put it back in the ground twice over. Yet while everyone is talking about windfall taxes, that doesn't seem to be part of the conversation."

A licence to trash

Allen admits that some may hesitate to embrace CCS (either at source, or recaptured from the atmosphere) because of the perception that it would allow the fossil fuel industry to carry on extracting and producing forever. However, he argues that the industry would decline because it would no longer make economic sense. "If you include the cost of disposing of CO₂, a lot of our fossil fuel resources would no longer look attractive," he says. "There is this nervousness among the environmental movement about the fossil fuel industry being allowed to do anything at all, but the alternative to a takeback obligation is no obligation at all, just to go drill."

Although the proposal is being taken seriously in countries such as the Netherlands, he says that leaders in the UK continue to argue about whether this should be seen as an alternative to an Emissions Trading System (ETS). "An ETS is a sensible way to find the





"For what we're paying for natural gas in Europe, you could capture all the CO₂ it releases into the atmosphere and put it back in the ground twice over"

least-cost ways of reducing emissions in the short term, but a bad way to incentivise CCS," he argues. "The problem is that until the carbon price becomes predictably higher than the full cost of CCS, nobody's going to do any CCS. We will have to wait until the 2030s before we start the build out of our CO₂ disposal infrastructure, by which time it'll be far too late for us to gain public confidence that it's going

to work. And that is assuming people put up with those high carbon prices, which is far from guaranteed."

He points to France's *gilets jaunes* protests as an example of how rising carbon prices can fuel a public backlash, before describing the UK's decision to launch a new North Sea licensing round for oil and gas companies as "golden opportunity missed" to implement the Carbon Takeback Obligation. "We have a choice: either we reduce global per capita energy consumption by around 50% by 2030, which we show no sign of doing, or we need large-scale CCS."

Turning rocks into trees

One of the most popular routes for companies wanting to reach net zero involves offsetting via nature-based solutions – typically tree planting. The problem, Allen says, is that companies are not replacing like for like,

Professor Allen cites the *gilets jaunes* protests in France as an example of public backlash to the rising carbon prices caused by emission trading

instead taking carbon from the geosphere and placing it in the biosphere. On the other hand, CCS – liquefying carbon emissions and injecting them back into geological formations – is effectively "re-fossilising" the carbon.

"For biosphere emissions, such as from the food system, it will be appropriate to offset within the biosphere – like for like," he says. "But if it's coming out of the geosphere, you've got to put it back there." He describes offsetting fossil fuel emissions via tree planting as "turning rocks into trees", adding: "You might be able to do that for a decade or two, but that's not a long-term solution."

Another benefit to offsetting via CCS is the ability to quantify the emissions being sequestered. "The beauty of this is that we actually know how much CO₂ is going back into the ground, just as we know what fossil fuels are coming out of the ground – this is well documented," Allen says. "That is in contrast to arguments over nature-based solutions and forestry, where it's hard to work out what carbon's gone where, what would have gone there otherwise, and so on."

Opening minds

The fossil fuel industry claims to support technological solutions to the climate crisis, but Allen says that this is typically the case only when others pay. "They've consistently said, 'we'll do carbon capture when there's a business case', which is another way of saying 'we'll do CCS when the government pays us the full cost of doing it and then some, so it's profitable'. That's a big reason why it hasn't happened – a lot of people are understandably leery of spending a lot of government money on a technology that's just benefiting the industry."

He points to the US and Canada, which have substantial subsidies for CCS – a cause of much debate. "I recognise we need this technology, so I'm happy to see people investing in it, but I sympathise with the people who say 'why the heck should we spend taxpayers' money on this technology when these companies are making so much money?' That's why I think the obvious solution is regulation that requires the industry to do it."

Allen stresses that the fossil fuel industry "absolutely" has the technical capacity to decarbonise the products they sell, and that the world can reach net zero by 2050, but says that this will require people to open their minds to new solutions, and for "the offsetting world to recognise that it needs to make a transition." He adds: "It's interesting how many people seem to have an extraordinarily vested interest in making this idea go away, and I don't really understand it. We're only seven years away from 2030, and emissions are still going up, so we're obviously not going to stop producing CO₂ in time. So we need to get rid of it, which means CCS to start with, and eventually direct air capture. I think a lot of people just need to wake up and smell the coffee." ☕





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The state of FREIGHT

A new ISO standard could help to tackle greenhouse gas emissions from the freight sector, says **Rick Gould**

The International Standards Organization (ISO) is developing a new standard for calculating greenhouse (GHG) emissions from the freight sector, an industry that accounts for about 11% of the world's GHG emissions. The standard, *ISO 14083*, is based on a successful industry standard that has helped many freight companies to calculate and manage their GHG emissions.

The importance of quantifying emissions

In 2011, the UK government stated that reporting GHG emissions would enable the country to meet climate change objectives, stating that "for businesses in the UK, as well as internationally, measuring and reporting of GHG emissions is considered an important part of the GHG management cycle and a tool for embedding sustainability into a company".

Calculating GHG emissions also empowers an organisation to identify when and where its emissions occur, so it can efficiently and effectively target reductions. For example, researchers have found that GHG analysis in the freight sector can provide emissions reductions of up to 50% by suggesting the use of alternative routes, eliminating empty return trips, and consolidating and re-timing shipments.

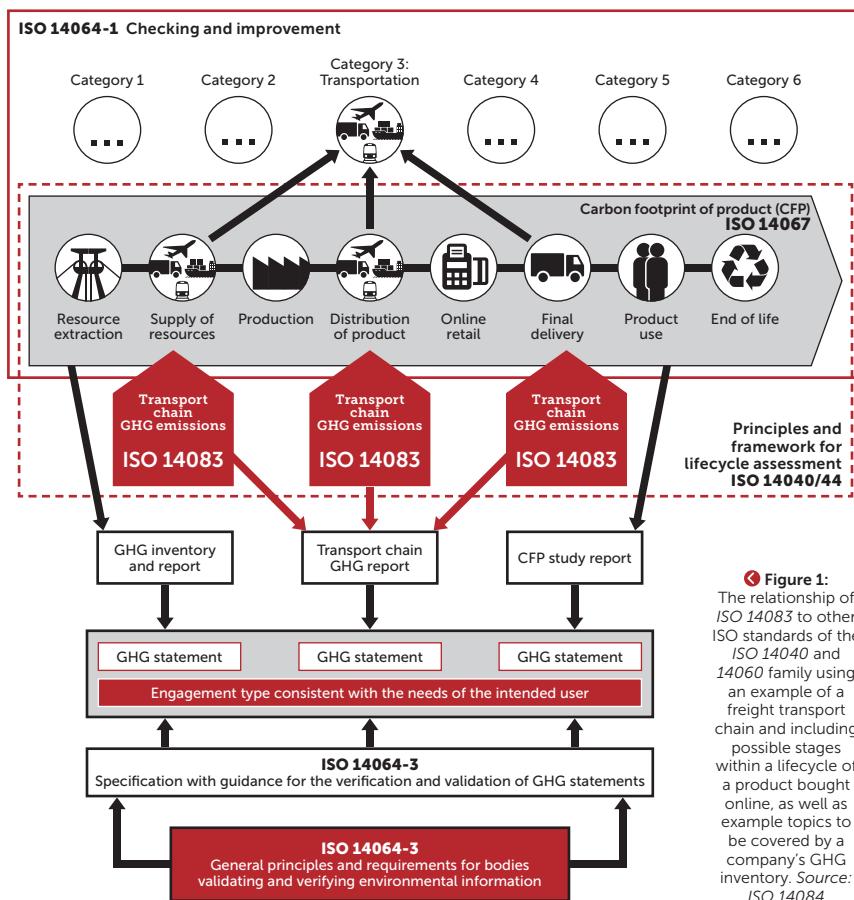
Calculating GHG emissions is challenging in the freight sector due to the complexities of interwoven supply chains that use multiple transport modes. However, it is important to solve this challenge because of the sector's

economic and environmental significance (see '*The economic and environmental significance of the freight sector*', right).

Calculating emissions

Developers have responded by creating several tools for calculating emissions in the sector. However, a diversity of approaches has made it hard to produce

complete, consistent and comparable assessments – so the Smart Freight Centre (SFC) decided to solve this challenge. The SFC is an international not-for-profit trade organisation that focuses on lowering GHG emissions from the sector, with the aim of guiding it to net zero by no later than 2050 and reducing GHG emissions by one billion tonnes by 2030.





The SFC created a bespoke group, the Global Logistics Emissions Council (GLEC), to develop harmonised, validated international guidelines for calculating and reporting freight transport GHG emissions. The GLEC began as a voluntary collaboration but has since grown to include more than 150 freight organisations and companies, and is backed by governments.

After it reviewed and combined the best available tools, such as the GHG Protocol, and filled in the gaps, the result was the GLEC Framework, published in 2016. This covers all transport modes of the freight transportation supply chain. What benefits does it bring?

"The first thing it achieved is harmonisation," says Dr Alan Lewis, technical development director at the SFC. "This results in buy-in from increasing numbers of organisations. The Framework gives you a baseline to calculate and report emissions in a meaningful way and also acts as a focal point for interactions with other organisations."

Since its launch, many companies worldwide have applied the Framework and it has grown into an international success story, driving down emissions and cutting costs. Despite this, the Framework has not yet achieved its full potential because, as an industry tool, it lacks official and formal approval. "The European Commission, for example, is supportive, but it cannot fully endorse it because it was produced by industry," says Lewis.

This challenge can be solved if the Framework is formalised by being converted into an ISO standard. The

THE ECONOMIC AND ENVIRONMENTAL SIGNIFICANCE OF THE FREIGHT SECTOR

According to the International Chamber of Shipping (ICS), container ships transport more than 11bn tonnes of goods across the world's oceans and seas each year – equivalent to 1.5 tonnes of goods per person. The International Maritime Organization (IMO) reports that this accounts for 90% of the world's trade by volume.

Air freight adds around 70m tonnes each year, and beyond the world's ports, shifting freight overland becomes increasingly complex, involving a dynamic web of storage facilities, trains, trucks and delivery vans. And the volumes shipped are growing – they have more than doubled during the past 20 years and are expected to increase by more than 50% during the next decade.

Distributing billions of tonnes of goods requires a huge amount of energy, largely

provided by fossil fuels that cause significant GHG emissions. Researchers at the Massachusetts Institute of Technology determined that freight transportation causes about 8% of global GHGs, with warehousing and distribution centres adding another 3% to this figure. If freight transport keeps growing at its current rate under a business-as-usual scenario, the freight sector could be contributing more GHGs than any other sector by 2050.

This is unlikely, given that decarbonisation and net-zero strategies are gaining traction within the sector. The IMO and ICS, for example, both have strategies to decarbonise, and the ICS has committed to net zero by 2050. Meanwhile, AP Moller-Maersk, the world's largest integrated logistics company, aims to be climate neutral by 2040.

result will be *ISO 14083: Greenhouse gases – Quantification and reporting of greenhouse gas emissions arising from transport chain operations*.

An international standard

"We approached ISO and proposed a new work item to produce an International Standard," Lewis says. "The idea was to embed the principles and factors of the GLEC Framework within the ISO 14000 environmental management family of standards." In effect, *ISO 14083* is a synergy between the GLEC Framework and the ISO 14000 family. The latter includes the ISO 14040 series for lifecycle analysis, which works well for supply chains and interconnected processes.

Once published, *ISO 14083* will create a common methodology for quantifying and reporting freight sector GHG emissions. "The standard will ensure industry, governments and investors use a single methodology, consistent with GLEC Framework," adds Lewis – as well as solidifying a strong future role for the Framework. It will also provide the formal recognition that the Framework needs if it is to expand its reach and catalyse net zero for freight transport. T

RICK GOULD, MIEMA CEnv, is a senior air quality adviser at the Environment Agency. He is writing in a personal capacity.

5%

Militaries and their respective defence industries contribute 5% of global emissions

45%

NATO has promised to slash its emissions by at least 45% by 2030

47TH

If the US military was a country, its fuel use alone would make it the 47th-largest greenhouse gas emitter

"The accounting and transparency just isn't there on greenhouse gas reporting for the military"



A losing battle?

The world's militaries are major contributors to global warming, but little is known about the exact scale of the problem. **Huw Morris** reports

It's one of the world's most polluting industries, but few people know it. Even experts scratch their heads about the true scale of this inconvenient truth. Yet the contribution of the world's militaries to climate change is beginning to emerge.

Commentators describe it as the 'carbon footprint'. If the US military was a country, its fuel use alone would make it the 47th-largest greenhouse gas (GHG) emitter, nestling between Peru and Portugal, according to a 2019 study by academics at Durham and Lancaster Universities for the Institute of British Geographers. This also revealed that the US Department of Defense is the world's largest institutional emitter and consumer of fossil fuels.

A two-part issue

The challenges for defence are twofold. The first problem is that parts of the world are becoming climate change hotspots, which is exacerbating tensions, rivalries, grudges and vulnerabilities: consider Africa's Sahel region, where ethnic groups battle over diminishing agricultural resources against a backdrop of soaring temperatures and expanding populations. Such areas are

also recruiting hotbeds for terrorist organisations like Boko Haram or Islamic State West Africa.

In another example, Russia and the US are increasingly using the Arctic as a military exercise ground for training manoeuvres and equipment trials. Russia regards the emerging Northern Sea Route as a 'national transportation corridor', while China and the US see it as international waters.

In addition, most cities and conurbations around the world are near coasts, suggesting that major humanitarian rescue operations will be required in the future as sea levels rise. However, so are numerous military bases – making sea level rise a security threat as well as a humanitarian one.

The second problem is the contribution of defence to climate change – which, if the US military is anything to go by, is huge. Scientists for Global Responsibility (SGR), a network of academics specialising in this field, estimates that militaries and their defence industries contribute 5% of global emissions – more than aviation and shipping combined.

"We should take this very seriously," says Oliver Belcher, associate professor at Durham University's School of

Government and International Affairs and co-author of the 2019 study.

"As a percentage of the US economy, the military is very small, at less than 2% – but if you think as an institutional and climate actor, it's comparable to many countries."

An enormous challenge

Such research is just scratching the surface. Belcher cites the example of the US Defense Logistics Agency, which manages the end-to-end global defence supply chain for the US's five military services, 11 combatant commands, other federal, state and local agencies, and partner and allied nations. It employs 25,000 staff in multiple supply chains that contract for material and services across military classes of supply. These include food and water, clothing and textiles, bulk petroleum and other energy products, construction material and equipment, personal demand items, medical material and equipment, and repair parts for land, sea and air systems.

Linsey Cottrell, environmental policy officer at think tank and consultancy the Conflict and Environment Observatory, adds that the US military's fuel use alone is larger than that of 140 countries. "They have a considerable dependency on fossil fuels because of the nature of their operations and their very large and complex supply chain," she says. "You are not just talking about fuelling or moving machinery around and undertaking operations, but the whole network of the military complex."

"The accounting and transparency just isn't there on GHG reporting for the military. There is uncertainty as to how big this problem is, with



rough estimates putting it at around 5% of global emissions, but with lots of caveats because we don't really have the data.

"That's the usual military activities, training and procurement. Then you start thinking about a conflict setting: about GHG emissions, which aren't considered in any reporting on how a conflict causes infrastructure damage, all the subsequent reconstruction, landscape degradation and deforestation, among others. That is not being considered at all, so the 5% figure will be even higher."

The military emissions gap

Why do we know so little? Because militaries do not have to tell the UN. Belcher points out that while 46 countries and the EU are committed to providing annual reports on their national emissions under the UN Framework Convention on Climate Change, and the 2015 Paris Agreement removed the Kyoto Climate Accord's military exemption, the Paris Agreement left reporting on military emissions voluntary. This has led to what he describes as a "military emissions gap", in which under-reporting is standard and data is not accessible or is lobbed in with civilian activities – especially energy and aviation. Then there are countries with gigantic defence budgets, such as China, Israel, India and Saudi Arabia, that do not report to the UN.

Even when countries report their military emissions, there are doubts. SGR says official data published by different government bodies for UK military GHG emissions are neither consistent nor complete enough to guide policymaking. It analysed the main datasets published by the Ministry of Defence (MoD) and

HOW THE MoD SEES SUSTAINABILITY

Responsible for 50% of UK government's estate emissions, the MoD took a bold step in publishing its *Climate Change and Sustainability Strategy* in March 2021.

The 15-page document outlines three strategic ambitions for 2050. One: the UK's defence will have adapted to be able to fight and win in ever more hostile and unforgiving physical environments. Two: defence will have reduced its emissions and increased its sustainability activity, with the MoD contributing to the UK's legal commitment to reach net zero. Three: defence will act and be recognised as a global leader in response to emerging geopolitical and conflict-related threats exacerbated by climate change.

The strategy sets out an action plan covering three 'epochs' in the journey to achieve this: 'setting the foundations' from 2021–25, 'minimising and fitting for the future' from 2026–35, and 'harnessing the future' from 2036–50. Examples of initiatives include using electric vehicles with added 'stealth', optimising smart buildings for efficiency, recycling materials for fuel and components, and reducing waste and footprint through advanced maintenance methods.

the Department for Business, Energy and Industrial Strategy and discovered major discrepancies.

None gives a complete picture of Scope 1 and 2 GHG emissions, while 'headline' figures underestimate emissions by 36%–71%.

"If lifecycle emissions were included, that understatement would be considerably larger," says SGR executive director Stuart Parkinson.

"We have an ambition to contribute to net zero and adapt to a climate change world," says MoD climate change and sustainability director James Clare. "It's important to ensure climate change and sustainability are embedded in policies so we are making the most informed decisions we can, and make sure those decisions are as futureproofed as they can be. We need to ensure we have the right foundations in place."

A key concept is for defence to become a "fast follower of industry", using the UK's green transition to add to its capabilities and installing technology as early as possible. "Most areas should be led by the civilian world, but we need to stay close to developments to see what we can exploit ourselves," says Clare. He cites as an example any new technology that offers an "operational edge against adversaries, or helps us take military personnel out of harm's way".

While the MoD has carried out a lot of work on emissions, data is a challenge – particularly in terms of "the depth we want to get into so we have the right understanding and make better decisions," Clare adds.

"We know where we are now, but we need better knowledge on where we are going and our future trajectory."



MoD sees sustainability,

above). Meanwhile, NATO has promised to slash its emissions by at least 45% by 2030 and reach net-zero by 2050. There is a roadblock, though: so far it has not published its carbon counting methodology, an area in which militaries are notorious dawdlers.

"We were hoping last year, when they said they would be developing a methodology to support their members to undertake GHG reporting, that this was good news, that it would be shared and strengthen other militaries' response to climate change – but it hasn't been shared," says Cottrell. "You can't understand fully what's been included, which is something you need to track what they're doing. We all know the climate crisis must apply to all sectors, so why should one sector be exempt?"

"We all know the climate crisis must apply to all sectors, so why should one sector be exempt?"

Signs of progress?

There have been some advances.

Enshrining net-zero targets into law, as the UK and Switzerland have done, offers a peek behind the curtain; indeed, last year the UK took the unusual step of unveiling a strategy for climate change and sustainability (see 'How the

HUW MORRIS is a freelance journalist.



Taking stock

Chris Seekings reports on the IEMA State of the Profession Survey 2022, shedding light on aspects from the gender pay gap to ethnic diversity

More than 1,000 IEMA members responded to the 2022 State of the Profession Survey, providing a comprehensive snapshot of salaries, career paths and demographics within the environment and sustainability profession.

The findings suggest that the profession is diversifying and becoming more woman-dominated, with salaries rising and the gender pay gap narrowing. IEMA members tend to be better paid than non-members in similar roles, and

the majority agree that membership has been positive for their careers.

However, the findings also suggest that few IEMA members have had a real pay rise when taking the cost of living into account, and a significant number feel that progression within the profession is unfair.

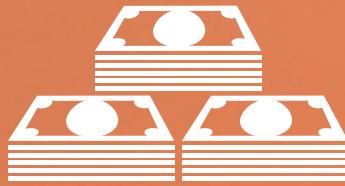
1,000
More than 1,000 members responded to the 2022 survey

Salaries

Full-time gross salaries among IEMA members averaged £47,570 this year – up 7% from £44,439 in 2018 – while average part-time salaries stood at £37,147. This is considerably higher than the UK's mean full-time salary of £31,447, according to the Office for National Statistics.

Salaries varied by membership level, with Fellows who work full time earning an average of £79,369, compared with full members on £58,656, Practitioners on £49,614, Affiliates on £45,898, Associates on £40,989, Students on £34,497 and Graduates on £30,547.

IEMA salaries across sectors were higher than salaries nationally, but there was variation between role types, with chief executives or senior officials typically paid less than non-members in these roles, and engineering



£47,570

Full-time gross salaries among members averaged £47,570



professionals and production managers paid more.

Members working in business and industry earned most, with an average gross salary of £52,456 – up 10.5% from £47,404 in 2018. This was followed by members working in the built environment and in energy and utilities, who can expect average gross salaries of £51,178 and £51,443, respectively.

Those with a CEnv earned an average of £56,837 – significantly more than members who aren't CEnv registered. The salary uplift for this group was most pronounced in the 21–30 age group, but could be seen across all ages.

The top 5% of IEMA Fellows (95th percentile) had an average gross annual salary of £115,000. The top 25% had an average gross salary of £94,000, and the top 75% £54,182.

For full members: Top 5%: £93,000, top 25%: £67,500, top 75%: £44,950.

For Practitioners: Top 5%: £75,000, top 25%: £54,000, top 75%: £35,000.

For Associates: Top 5%: £71,000, top 25%: £47,000, top 75%: £30,000.

For Graduates: Top 5%: £50,000, top 25%: £34,500, top 75%: £25,000.

For Affiliates: Top 5%: £75,000, top 25%: £49,000, top 75%: £30,000.

For Students: Top 5%: £73,000, top 25%: £45,000, top 75%: £22,000.

The gender pay gap

Although more still needs to be done to ensure equal pay between the genders, it

was encouraging to find that the gender pay gap has narrowed significantly this year. The average gross hourly salary was £25.86 for men (including trans men) and £23.60 for women (including trans women). The overall gender pay gap was therefore 8.75%, down from 14.1% in 2018.

Women earned an average of £43,410, compared to £49,591 for men. However, this was largely accounted for by differences in the age profiles of the genders, with women often being younger. Of survey respondents, 35% of women were aged 21–30, compared with just 18% of men. Conversely, 23% of men were aged 51–60, compared to just 12% of women, and 9% of men were aged 61–70, compared with only 2% of women.

Women were also more likely to work part time, with 19% doing so, compared to 7% of men. The average full-time salary for members was £44,858 for women and £50,216 for men. The average full-time salaries for full members, meanwhile, were £57,901 for women and £58,591 for men, indicating a far narrower gap.

Pay rises and promotions

This year's survey also found that 72% of IEMA members received a pay rise in the last year, up from 64% in 2017. However, only 13% received a real pay rise when taking the cost of living into account.

Looking at pay rises within sectors, only 4% of those working in public sector organisations received an increase that

kept pace with the cost of living, compared to 18% of those in consultancy roles. Of those working in the built environment, 22% were given an above-inflation pay rise, compared to 4% of those at NGOs.

Although real pay rises were uncommon, 19% of respondents had been promoted during the past year, compared with 13% in 2017. Of those working in business and industry, 14% had been promoted, compared with 26% of those in consultancy organisations. The findings also show that 27% of members working in the built environment sector had been promoted, compared to 13% of those doing charity and voluntary work.

A diversifying profession

For a profession that has been criticised for not doing enough to promote ethnic and social diversity, it was also interesting to find that significant demographic changes may be taking place.

While 94% of survey respondents aged 41+ described themselves as white, this was true of only 84% of those aged 21–30 and 85% of those aged 31–40. Of postgraduate students, only 44% described themselves as white.





Furthermore, 27% of the members surveyed were 21–30-year-olds, making it the most common age group. This was followed by 31–40-year-olds on 26%, 41–50-year-olds on 23%, 51–60-year-olds on 17%, and 5% aged 61–70.

At the same time, 52% of members had only been members for one to five years, and 80% of members from minority ethnic backgrounds had joined within the past five years, suggesting that the profession is diversifying.

Of respondents, 53% identified as being women and 44% as men. Women were more likely to report that they were sustainability and environmental specialists, on 61%, compared with 42% of men.

IMAGES: ISTOCK/SHUTTERSTOCK

"Although this year's survey had plenty of positive findings, there is much to do to break down barriers to progression"

Although this may suggest that the profession is becoming more woman-dominated, the findings may also be because women were more likely to be graduate members and to have been in the profession for one to five years, while men were more likely to be Fellows.

Barriers to progression

There was mixed news regarding perceptions of barriers to progression. While 40% of the survey respondents felt that progression in sustainability and environmental roles was fair, 25% disagreed. There was a significant gender divide, with 62% of men reporting fairness in progression, compared to 35% of women. Furthermore, 25% of women reported experiencing gender discrimination, versus 2% of men; this peaked at 33% for those aged 31–40.

A quarter of members from an ethnic minority experienced racial discrimination as a barrier to their career progression, while 11% also experienced class-based discrimination. Overall, 54% of members from an ethnic minority background had experienced "many barriers" in developing their careers, compared to 32% of white members. This difference was even more stark for those aged 21–30 (62% versus 31%), and for black men (63%).

The findings also show that 18–20-year-olds were most likely to report age discrimination, on 40%, compared to 13% overall. Those aged

under 30 were particularly likely to report barriers due to lack of training opportunities, lack of careers advice and too much competition for positions (22%).

Of those living with a disability, 22% had faced workplace bullying, compared with 9% overall; 6% had experienced disability or health discrimination.

Unclear progression pathways was the key barrier experienced by IEMA members in their careers, but a lack of confidence was also key, particularly among women.

Although this year's survey had plenty of positive findings, the results show that there is much to do to break down barriers to progression, improve diversity and inclusion, and further narrow the gender pay gap. IEMA members can learn more about the Institute's Diverse Sustainability Initiative at diverseustainability.net, while a newly launched Green Careers Hub (greencareershub.com/green-skills) will help members with career progression. IEMA members should also look out for new training courses, and reach out if they are ever in need of further support. ■

READ THE FULL REPORT

Download the full results of the IEMA State of the Profession Survey 2022 at bit.ly/IEMA-SotP_2022



Environmental management is becoming more complex for organisations as drivers of environmental sustainability expand and become more demanding.

Many organisations are driven to improve environmental performance by external stakeholders such as government agencies, customers and shareholders. These stakeholders are increasingly alive to issues such as environment, social and governance (ESG) reporting and net-zero carbon, as well as legal or reputational drivers. So why do auditors often discount these stakeholder drivers, focusing instead on 'traditional' environmental matters such as waste disposal or spill response?

ISO 14001:2015 requires organisations to determine their context (clause 4.1) – in other words, to gain a strategic understanding of the environmental circumstances in which they operate. It also requires them to understand stakeholders' needs and expectations, and decide which of these to commit to as compliance obligations (clause 4.2). The output from these processes is critical for establishing the scope of an organisation's environmental management system (EMS) and focusing on the most important environmental issues.

This should influence the organisation's policy commitments (clause 5.2), the areas on which it focuses improvement (clause 6.2), and the priorities it gives to environmental aspects and impacts (clause 6.1.2). These, in turn, shape the organisation's priorities and approaches when managing environmental performance through other EMS elements.

Some organisations are applying their EMS effectively in recognising and addressing broader sustainability drivers, but many are still focusing on traditional risk areas. Similarly, it seems that EMS auditors have not kept pace with the change and scale of environmental sustainability ambition,

such as carbon reduction targets – particularly net-zero carbon goals. These failings may be found in both internal and external auditing, but if certification auditors fail to recognise the importance of broader environmental sustainability goals, it calls into question whether stakeholders can rely on certification to ensure their expectations about *ISO 14001* EMSs are being fulfilled.

Zooming out

While pollution prevention and waste management are important matters that need suitable controls, they may be orders of magnitude different to the drivers that businesses now experience. For example, many customers now require suppliers to show that they are working towards net zero (an 'interested party' expectation that becomes a

Material conditions

Are environmental auditors taking due care around materiality? **Richard Gotheridge** and **Nigel Leehane** discuss



Figure 1: Auditors should not just focus on site-based issues, but ensure they understand the relevance of strategic drivers and stakeholder concerns, and the need to apply a lifecycle perspective.



compliance obligation in accordance with *ISO 14001*). It is not helpful if auditors remark that 'net zero is a fallacy' or dismiss it as a 'customer goal', rather than that of the organisation. This demonstrates a failure to appreciate *ISO 14001*'s intent for stakeholder drivers to be recognised and acted on through the EMS.

Auditors should seek evidence that the organisation has identified relevant strategic issues as part of its context and stakeholder concerns, and taken them into account in making commitments, establishing objectives and focusing the EMS. There is no requirement to document the output from clauses 4.1 and 4.2, although many organisations do. Good auditors, however, will make their own judgments on whether the EMS's scope and commitments reflect the key strategic issues.

It is also concerning that audit focus tends to be on site-specific operational issues, ignoring the lifecycle perspective. The health and safety standard *ISO 45001* excludes 'end user, supplier, or material selections' from its remit on the basis that the standard is an occupational health and safety standard, not a product safety standard. *ISO 14001*, on the other hand, requires organisations to consider their supply and value chains in relation to environmental aspects and operational controls – and, by implication, to consider context. This means that an organisation may decide that it needs to extend its EMS processes to procurement or product and service design, to ensure that these meet the environmental sustainability goals of it and its stakeholders.

For some organisations, especially small-to-medium enterprises, there may be few opportunities to address lifecycle

issues, but they should still be considered. For larger organisations, it may be critical that their products meet customer sustainability expectations, as this could provide opportunities to expand market share. Similarly, addressing raw material selection or service procurement may be important to overall environmental performance.

The standard requires all relevant aspects and impacts to be identified, so it can control or influence 'considering a lifecycle perspective' and then assess the significance. It does not just expect controls to be implemented – it requires influence to be administered appropriately. Influence that is not administered is a potential future risk, an opportunity not taken – arguably, the organisation is not demonstrating continual improvement. Only where there is no control and no realistic opportunity to influence should it be discounted. This should be clearly assessed by auditors.

Unfortunately, too many auditors discount influence over bigger, more material issues, such as carbon reductions by product end users or supplier services – instead focusing on influence over on-site or manufacturing controls.

A risk-based approach

ISO 19011:2018, which provides guidance for auditing management systems, emphasises the importance of taking a risk-based approach to audit planning and conduct. In clause 4, which deals with auditing principles, it explains that this involves considering risks and opportunities, focusing on 'matters that are significant for the audit client'. Key strategic environmental issues and stakeholder concerns fall into this category, as do the organisation's

commitments and priorities for environmental management and improvement. In addition, *ISO 14001*'s internal auditing clause states that the internal audit programme should be established, taking into consideration the 'environmental importance of the processes concerned'.

This risk-based approach aims to ensure that material issues are at the forefront of EMS auditing. Just as organisations producing annual sustainability reports are expected to report on material issues that are relevant to stakeholders and that influence decision-makers, EMS auditing should give confidence that organisations are focusing their systems on the key issues.

Is your auditor working?

Organisations should ensure that their internal auditors appreciate the key elements of their environmental strategies, are able to audit against clause 4, and understand the importance of the lifecycle perspective in planning and operational control. External certification auditors are required by *ISO 17021 Part 1*, which deals with the requirements for certification bodies, to be competent not only in the requirements of the management systems standards they are auditing against, but also in their knowledge of business management practices. They should be able to recognise the external drivers that are shaping an organisation's strategy and determining intended EMS outcomes – which, ultimately, is the goal of *ISO 14001*. Addressing the material issues is key to providing an effective EMS auditing service; if this is not happening, it may be time to change auditor. ↗

RICHARD GOTHERIDGE, MIEMA is a safety, health, environment and quality manager in defence and construction.

NIGEL LEEHANE, FIEMA is an environmental management consultant and chair of the BSI environmental auditing subcommittee.

Making green claims used to be easy. Opportunities were plentiful, rules were lax and consumers didn't have a clue. However, 2022 presents a very different landscape for brands wanting to make such claims, with Tesco and Oatly among those that have got into trouble for greenwashing in recent months.

The supermarket chain was scolded by the Advertising Standards Authority because it couldn't provide the full lifecycle evidence to back up claims that its plant-based burgers were better for the planet. Oatly, meanwhile, had done those lifecycle assessments (LCAs) for adverts relating to the impact of its dairy-free drinks compared to milk – but it wasn't enough. It was a classic case of over-claiming, according to Advertising Standards Authority director of complaints and investigations Mike Lockwood. "Just because your product is probably better for the environment [...] doesn't let you off the hook for being accurate and being precise," he told the *Adventures in Coffee* podcast.

The bar, it seems, is higher than ever. The Competition and Markets Authority has produced a new green claims code to help companies and is on the hunt for big firms that fall foul of the rules (it's currently unpicking claims being made by ASOS, Boohoo and George at Asda). "It is no surprise that regulators are looking for green claims to be backed up," explains Laura Kirwan, lead sustainability co-ordinator at food data company Nutritics. "LCAs are a method of doing that."

Higg's hiccup

The trouble is that it's not just the claims under scrutiny – it's the LCAs. If done well, an LCA can help a business to defend regulatory challenges, explains Anne Marie Taylor, director at law firm DWF. However, LCAs are

frequently done badly, using data that will produce the company's preferred answer, failing to consider the full lifecycle of impacts, or offering no transparency or independent review of the process.

To understand why this happens, why not all LCAs are bad, and how we can make the good ones better, it is important to consider what an LCA is and isn't. The assessments are calculations that aggregate environmental impacts (global warming potential, eutrophication, water use and so on) across the stages of a product into a single metric. "They are based on science, but it is not a scientific method," Kirwan says. "It is an accounting method."

As such, they are useful tools for businesses that are seeking to count their carbon as they set net-zero targets and embark on reduction plans. However, they are also in fashion because of their role in backing up

Ambiguous assessments

David Burrows delves into some of the issues with lifecycle assessment – and how brands are misusing results

green claims,
including eco labels.
One of the six principles of
the Competition and Markets

Authority's code is that "claims must consider the full lifecycle of a product or service", but this is easier said than done.

The fashion industry's use of the Higg Materials Sustainability Index (Higg MSI) is a case in point. The index, a set of five tools launched by the Sustainable Apparel Coalition in 2011, was designed to measure and compare the environmental impact of different materials' LCA data. Companies wanted a tool to help them do LCAs – one that would avoid completing time-consuming and costly new assessments for every product, but allow them to better understand their impacts and where to focus their actions. Sensible stuff.

However, last year, brands started using the index on consumer-facing labels and the whole thing came unstuck. In June, Norway's Consumer Protection Authority moved to ban the index's use in marketing to consumers, stating that outdoor clothing brand Norrøna was breaking the law by marketing its clothes as environmentally friendly based on the Higg MSI. The index doesn't cover the full impact of a garment bought in a shop and is based on average figures, so the information was misleading. The retailer was, for

"Brands have been operating with one eye open and one eye closed for years"

"It is the quality of the data that goes into an LCA that determines the quality of the output"

example, promoting an organic cotton T-shirt as having significantly less impact than a regular one, but had "no grounds for such a claim".

The Sustainable Apparel Coalition has quickly paused the consumer-facing part of its programme, stating that it was "fully committed to the use of standardised data to empower better decision making" but recognised "the additional challenges that come from translating LCA data to consumer facing information".

It was the application of the LCA data that presented the problem. "I think the intent was positive," says Karine Kicak, associate director at sustainability consultancy Anthesis – but she adds that there wasn't the necessary level of rigour, including peer review, that would enable the index to be used to make public claims.

Scrutiny welcomed

Given the index's global reach and the reliance on LCAs more widely to help steer consumers, businesses and governments towards environmental sustainability, the ripples from this could spread far and wide.

LCA practitioners are all too aware of the assessments' pitfalls: the assumptions that they need to make, the gaps in the data (forcing them to use secondary instead of primary data) and the sketchiness of the standards. The reality of consultancy life is that you are not paid for





"LCAs are based on science, but it is not a scientific method. It is an accounting method"

Clothing companies have come under fire for using the results of LCAs in customer-facing materials

three years to do an LCA, as an academic might be, suggests one senior industry expert. That doesn't produce a bad study, but the assumptions being made need to be transparent, they add.

Anyone who does an LCA should be happy for other people to "poke it", suggests Simon Gandy, technical director at SLR Consulting. They should also be ready to "get criticism where things have not been done fantastically".

It's certainly clear that the Higg MSI has several flaws, which were brutally exposed when the application of the data shifted from internal decision-making to external and promotional material. It isn't the only approach being scrutinised. "From the Higg MSI to brand and manufacturer websites, claims are made based on LCAs that are not available to the general public," wrote Veronica Bates-Kassatly, who interrogates the data behind sustainability claims. "And this is highly problematic."

Her recent white paper, *The rise of life cycle analysis and the fall of sustainability*, written with professor Dorothée Baumann-Pauly of Geneva University's Centre for Business and Human Rights, notes that "it is the quality of the data that goes into an LCA that determines the quality of the output. Only if the data are representative and reliable are the outputs meaningful." If that isn't the case, consumers, investors, businesses and even policymakers can be misled. Well-intentioned legislative measures may even increase global warming, they warned.

The focus shouldn't be limited to carbon, either. There is interest, for instance, in how LCAs could account for the environmental impacts they currently miss. "Marine pollution isn't really covered under LCA, yet we know that's a massive environmental issue," explains Simon Miller, co-founder of sustainability consultancy 3Keel. LCAs do consider environmental factors such as land use and water, says Pauline Op de Beeck, associate director at the Carbon Trust, but "we've not yet found a robust and meaningful way to communicate these results to the public."

It's easier to measure fewer things, but as Baumann-Pauly suggests, "we have got to be ambitious. Just because it's complicated, doesn't mean that you can't do it." Data needs to be better, she adds. "Brands have been operating with one eye open and one eye closed for years."

There is also the fact that LCAs only measure environmental impact, which has led to 'sustainability' being narrowly defined as 'environmental sustainability'. Social dimensions are overlooked, and considering them can lead to very different conclusions. Take organic cotton. Environmentally, such a production system could make sense – but the farmers on organic smallholdings "have to work longer and harder and still produce less, their productivity goes down, they earn less and are trapped in poverty for longer," notes Baumann-Pauly. Research she did last year found "not a single robust independent study anywhere that shows that organic farmers end up better off than their conventional neighbours."

Shaken and stirred

The likes of SLR are working on how to integrate social dimensions into their assessments, while the OmniAction initiative aims to wrap more and more metrics into a holistic assessment of foods, eventually producing a consumer-facing label. "Consumers have a right to know this stuff," says founder Lise Colyer.

"I think it's healthy to shake things up," adds Baumann-Pauly. "We will continue stirring."

DAVID BURROWS is a freelance writer and researcher.

A SEA CHANGE FOR ENERGY

Ed Walker examines the installation of new electricity transmission infrastructure between Scotland and England

The UK and Scottish governments have both set legally binding targets to reach net-zero greenhouse gases by 2050 (2045 in Scotland). As we transition away from traditional fuel sources for powering vehicles and heating homes, successes in offshore wind and other sources of renewable and low-carbon generation are gaining much attention – but how else is our energy system evolving?

The UK is one of the world's largest offshore wind markets, with over 10GW



of installed capacity. In August, the government gave The Crown Estate the go-ahead to progress with the next steps in its Offshore Wind Round 4 plan, a leasing opportunity that could unlock up to 7GW of low-carbon energy.

In 2022 we also saw Crown Estate Scotland announce the winners from its first leasing round for Offshore Wind

– 'ScotWind'; alongside 25 GW of potential generation, this included specific provisions for floating offshore wind. ScotWind will soon be joined by further initiatives under the Innovation and Targeted Oil and Gas scheme – a leasing round focusing on projects to reduce oil and gas production emissions.

Electricity generated through renewable and low-carbon technology

"We engaged with local communities and undertook stakeholder engagement to understand concerns"

in Scotland is growing, but there is a need to deliver green energy to other parts of the UK, to aid the decarbonisation of its energy system.

New energy links

Two overhead transmission lines and one subsea link currently carry substantial volumes of electricity between Scotland and the rest of Britain. The subsea link, Western Link, is 420km long, connecting the west coast of Scotland with Wales and providing more than 2.2GW of inter-connection capacity. Developed by ScottishPower (SP) Transmission and National Grid Electricity Transmission (NGET), it can transfer enough renewable electricity to supply more than two million homes. With renewable energy growing in Scotland, what is next?

In 2022, NGET and SP Transmission applied for consents for Eastern Link 1 (EL1), which will transport electricity between East Lothian and County Durham or vice-versa. Meanwhile, NGET and Scottish and Southern Electricity Networks (SSEN Transmission) submitted applications for a second link, Eastern Green Link 2 (EGL2), between Aberdeenshire and East Yorkshire, which will carry enough electricity to power more than two million homes. These are the first of four proposed new high voltage direct current (HVDC) links between Scotland and England.

In 2022, UK energy market regulator Ofgem approved the Final Needs Case for both projects, subject to consents. In doing so, it confirmed that, having considered consultation responses and having acknowledged the projected

EASTERN LINK 1

Marine length: Approximately 176km

Capacity: ~2GW

Scottish landfall: Thorntonloch Beach, East Lothian

English landfall: Seaham, County Durham

Estimated programme: Commissioning, testing and operation from 2027

EASTERN GREEN LINK 2

Marine length: Approximately 436km

Capacity: ~2GW

Scottish landfall: Sandford Bay, Aberdeenshire

English landfall: Fraisthorpe Sands, near Bridlington, East Riding of Yorkshire

Estimated programme: Commissioning, testing and operation from 2029

increase in renewable energy generation, "there remains a need for both links."

EL1 and EGL2 broadly comprise the same onshore components at either end – a converter station, underground cables and other infrastructure to link to the existing electricity transmission network, connected by subsea HVDC cables.

Cable installation

Taking the example of EGL2, how are the cables installed in the marine environment? At both the Scottish and English ends of EGL2, locations have been identified along the Aberdeenshire and Yorkshire coastline, called 'landfalls'. There are two main ways to landfall subsea cables – horizontal directional drilling (HDD) or open cutting. HDD is a trenchless technology, avoiding the intertidal zone and thus direct interactions with the foreshore. NGET and SSEN

Transmission intend to adopt HDD technology at both landfalls, reducing impacts on coastal environments.

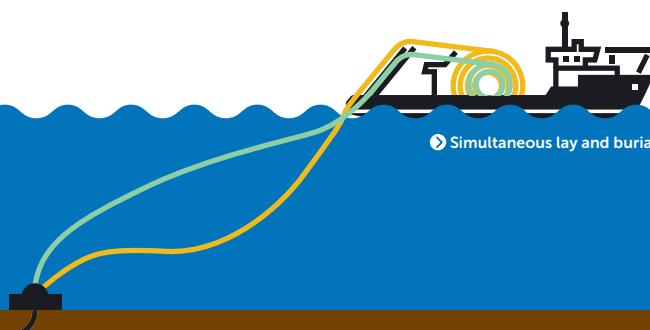
EGL2, including its submarine section, will consist of two single-core HVDC cables; a corridor between the landfalls has been identified in which these can be installed. Each cable will comprise an electrical core of copper or aluminium and insulation, surrounded by lead alloy and polyethylene sheaths to protect it from moisture and physical damage, then steel armour wires and outer serving. A fibre optic cable will run alongside for monitoring and communication.

The installation process will include:

- **Pre-installation surveys** to inform detailed cable engineering and installation approaches
- **Route preparation**, including the clearance of debris and material that may impede installation
- **Cable installation** using a range of equipment, including cable trenching ploughs, jet trenchers, mechanical trenchers and mass-flow excavation tools. The cables will be laid and trenched simultaneously (*below left*), or laid and then trenched separately (*below right*)
- **Additional protection** – the primary protection for the cables is to trench along most of the route. Where this cannot be done, external protection (such as rock berms) will be deployed.

A responsible approach

NGET and SSEN Transmission have considered a range of environmental, commercial, technical and human criteria to define cable routes that are the



best on-balance solutions. However, how will the cables interact with the marine environment – and how will they be managed? Sean Stokoe, NGET senior project manager (consents), and Matthew Kinmond, NGET consents manager, provide more details: "A huge amount of work goes into the staged approach of developing our projects up to consent submission. This includes a comprehensive suite of seabed surveys, extensive stakeholder engagement, robust assessments and systematic design work.

"However, this doesn't stop once the consent application is submitted. If we get consent, and once we appoint installation contractors, further work is undertaken to refine the detailed design of our projects to discharge consent conditions. This is achieved through further targeted surveys of the seabed we plan to work in, the development of detailed installation methodologies and protocols in consultation with key statutory bodies, and the finalisation of route design, micro-siting routes to avoid the most sensitive receptors where possible."

EL1 and EGL2 are clearly essential to a low-carbon future – but how will two such complex projects be delivered successfully? Barry Hughes, Eastern Link development and delivery lead at ScottishPower Energy Networks, shares his thoughts: "The Eastern Link project will be a key component in ensuring energy generated throughout the UK and in particular Scotland's East coast can be used in the most efficient way possible. It also provides a strong link between



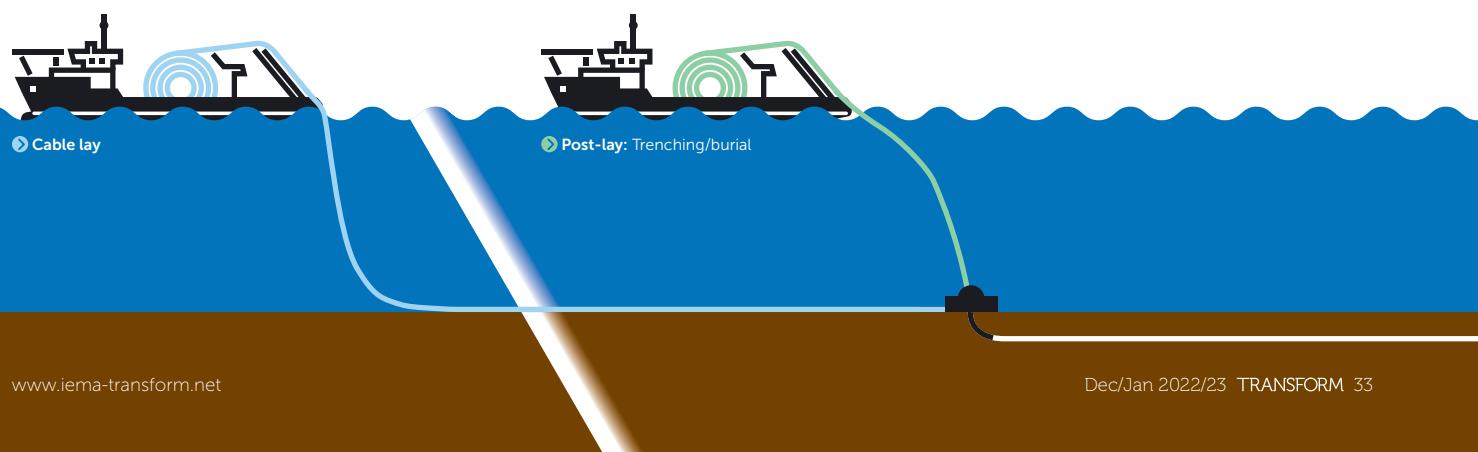
We take our commitment to the local area seriously and are keen to maintain good relationships throughout the lifecycle of the project. Eastern Link is a huge undertaking with significant investment and considerable operations involved, but the delivery of a project of this size and scale will make a significant contribution to net zero targets and enabling a sustainable future for all."

Kenny Nicolson, lead project manager at SSE Transmission, has this to say: "These links are critical to our net-zero ambitions, delivering UK and Scottish government renewable targets and reducing our dependence on and price exposure to volatile global wholesale gas markets by supporting home-grown, affordable low-carbon electricity generation. But we also recognise we have an obligation to deliver these links responsibly, minimising and mitigating impacts on the environment and other users of the sea, where we need to work together to coexist in harmony. We also need to work to minimise and mitigate impacts on coastal and inshore communities that play host to our infrastructure."

"As we edge closer to construction, we look forward to delivering this national infrastructure, which will support hundreds of skilled jobs throughout construction and thousands more throughout the economy." ^T

ED WALKER, MIEMA CEnv, is a principal environmental consultant working on a range of marine-power projects for global energy consultancy Xodus.

IMAGES: E WALKER, 2022/SHUTTERSTOCK



Why did you become an environment/sustainability professional?

As a kid, I was fascinated by nature and how plants and animals interacted. I was saddened by the amount of **rubbish washing up on the local beach**, which made me want to prevent pollution.

What was your first job in this field?

I was the first environmental manager for English Nature, implementing a version of ISO 14001 and writing its corporate social responsibility/environmental report.

How did you get your first role?

By volunteering with conservation charities and completing degree courses, I could show enthusiasm and knowledge.

What does your current role involve?

I support clients with International Organization for Standardization (ISO) standards, Publicly Available Specification (PAS) frameworks, UN Sustainable Development Goals and more. We provide legal registers for ISO, online training courses and our Ethical Toolkit to help supply chains comply with the Modern Slavery Act. Keeping services up-to-date takes time, as does managing the team.

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

More clients want hybrid or digital options for training or audits. Planning and preparation is key, as is a good client brief. My role has changed to allow me to mentor the team and help them achieve full IEMA membership or CEnv status. As



CAREER PROFILE



Becky Toal,

MIEMA CEnv

Managing director,
Crowberry Consulting Ltd

an LGBT owner, it's also been great to be part of the Diversity in Sustainability campaign.

What's the best part of your work?

Helping customers understand ISO/PAS standards or frameworks and how they can underpin environment, social and governance and sustainability strategies. It's also great when clients take positive actions, such as providing net-zero carbon training to their teams.

What's the hardest part of your job?

Riding the waves in difficult times and keeping a positive mindset.

What was the last development event you attended?

I completed a Chartered Management Institute Level 5 in Coaching & Mentoring, which allows me to support the team on sustainability and environmental management issues, using coaching tools to help them learn and grow.

What did you bring back to your job?

I can now approach any problem with a coaching mindset, and frame problems and solutions in a strategic way.

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

Listening and being responsive to clients; time and diary management; and using software such as QuickBooks and Teams.

If you would like to contribute a member profile contact: media@iema-transform.com

Where do you see the profession going?

It's great to see young people interested in sustainability, for there to be a defined pathway and a lot of mature people re-training to work in this sector. I am hopeful that roles such as sustainability manager will become the norm, and their skills more respected.

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

A bigger team, possibly with presence internationally. We work with universities to offer paid internships, student projects and research opportunities, and this will continue.



What advice would you give to someone entering the profession?

Learn as much as you can, listen to podcasts and read the trade press. Be part of a network such as IEMA and go to events. Be open minded and stay true to your values.

How do you use the IEMA Skills Map?

To help our team understand how they can progress. Having a defined pathway linked to personal development plans makes the skills and competencies clear.

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

Liverpudlian, tenacious and lucky.

What motivates you?

Seeing how people are getting involved with activities such as beach clean-ups, and wanting big brand responsibility.

What would be your personal motto?

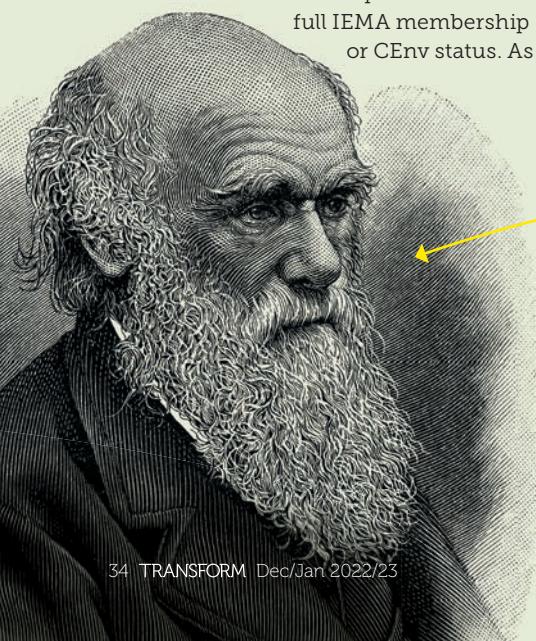
The tide turns twice a day – look for opportunities and ride the waves.

Greatest risk you have ever taken?

Setting up my business in 2006. Before that, taking on an ecology degree when there was no real career pathway.

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

Charles Darwin for a chat on ecology. ↗





DATES FOR YOUR DIARY

iema.net/events



28 NOVEMBER

WEBINAR

Biodiversity net gain – One year on and one year to go

It's been a year since the Environment Act became law, including a requirement for biodiversity net gain (BNG). This webinar aims to help stakeholders get up to speed with developments and practicalities of implementation and includes:

- A review of the status of BNG
- The evolution of measuring biodiversity
- Drivers of BNG
- Timeframes for implementation
- A review of the mitigation hierarchy and at what stages BNG should be considered as part of a project
- Compensation and compensation providers.

➤ [Register at bit.ly/BNG_1Year](https://bit.ly/BNG_1Year)

1 DECEMBER

CONFERENCE

EIA for infrastructure masterclass

At this conference, you will gain an understanding of the policy developments that are transforming environmental requirements, hear guidance on conducting environmental impact assessment, receive practical strategies for including biodiversity net gain and explore how to meet net-zero requirements for new projects.

➤ [Register at bit.ly/EIA_Masterclass](https://bit.ly/EIA_Masterclass)

12 DECEMBER

EVENT

IEMA Sussex, Surrey and Guildford Sustainable Business Network: Sustainable waste management and reduction

Ideal for delegates from SMEs who want to learn more about sustainable waste management and how they can reduce waste in their businesses.

It will consist of a panel discussion with representatives from the University of Surrey, Biffa, IEMA, Fill Refill Co. and more. Delegates can ask questions and network.

➤ [Reserve a place at bit.ly/IEMA_SustWaste](https://bit.ly/IEMA_SustWaste)

16 DECEMBER

SITE VISIT

East of England: Sizewell B visitor tour and discussion

IEMA members will have the exciting opportunity to visit the Suffolk Coast and discuss energy generation and decommissioning. This will be followed by a formal visitors' tour of EDF Sizewell B Power Station, which will begin at 1pm and last approximately three hours.

➤ [Book at bit.ly/SizewellB_tour](https://bit.ly/SizewellB_tour)

7–9 MARCH 2023

CONFERENCE

Futurebuild 2023

Futurebuild provides the stage for inspiring ideas, innovative solutions and knowledge sharing to drive sustainable construction and help us reach net zero. Your ticket will give you access to more than 400 brands, innovations, a world-class conference programme and inspirational seminar content curated by over 90 industry partners.

➤ [Register at bit.ly/Futurebuild2023](https://bit.ly/Futurebuild2023)

Return address:

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The Old School House

Dartford Road

March

PE15 8AE

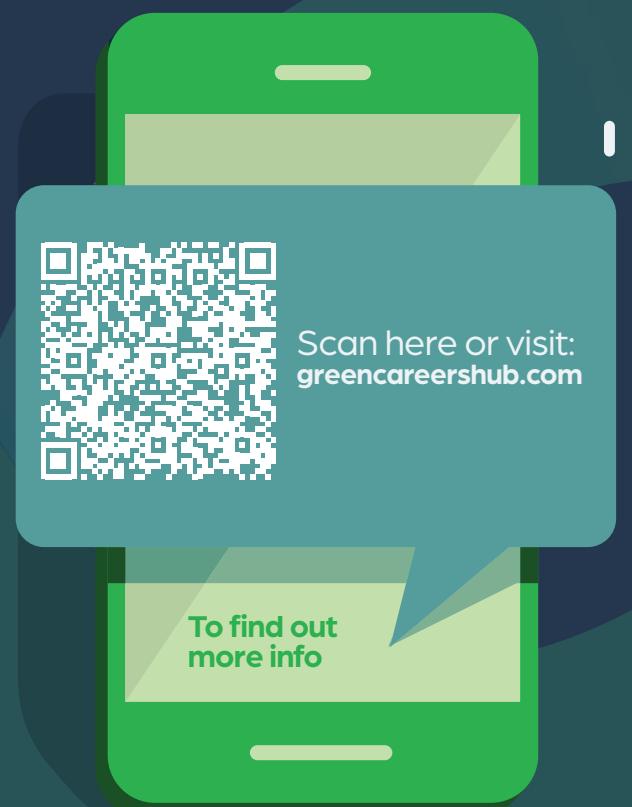


Green Careers HUB

Our online hub for everything on green jobs, skills and careers.

Launched October 2022 by IEMA

Browse the first iteration of our Green Careers Hub, which IEMA is building to provide a platform for users to access resources and careers information which relates to their current and future, skills, knowledge and experience. Our vision is a world in which all jobs are greener.



IEMA

Transforming the world to sustainability