The Green Industrial Revolution needs Green Industrial Regulation

In July, US President Joe Biden said: “When I hear the words climate change, I hear the word “jobs”.

In September, President Xi Jinping pledged China would achieve carbon neutrality before 2060.

In November, the UK Prime Minister Boris Johnson published a ten point plan for a Green Industrial Revolution, mobilising £12 billion of investment and supporting up to 250,000 British jobs to achieve net zero.

We are in a race.

Nations that help businesses decarbonise and prepare infrastructure for climate impacts fastest win investment.

Industries the Environment Agency regulates tell us a strong framework of green legislation gives them an economic advantage over global competitors.

Operating within England’s environmental regulations should be an assurance that a business is working to some of the highest standards on the planet.

This has a global snowball effect, if businesses prove profitable environmental improvements in one jurisdiction, they can demonstrate an operating model that can be scaled-up elsewhere.

Setting an example is important.

At the Environment Agency, we are using our activities and supply chain as a laboratory to find new ways to reach net zero, such as low carbon concrete for flood defences.

We have achieved a 47 percent reduction in our own direct emissions in the last 14 years, and are pushing ahead with our own 2030 net zero goal.

We will reduce our emissions by a further 45 percent by 2030, and address the effect of our remaining emissions through offsetting.

As our regulation helps business reach net zero, we will use our operations and supply contracts to help companies innovate and set an example.

In the 2 years between January 2017 and December 2018, the Climate Change Agreements the Environment Agency administers saved about 45,653 gigawatt hours of power, equivalent to 9 million tonnes of carbon dioxide, or enough energy to supply over 2 million homes a year.

Since 2010 emissions of greenhouse gases from the sites we regulate under the Environmental Permitting Regulations have decreased by 43 percent.

The Environment Agency has now begun to operate the new UK Emissions Trading Scheme.

We have worked with BEIS and the Devolved Administrations to shape the new regime, and there is an opportunity to go further.

Significant carbon reduction has happened in the UK with the switch to renewable energies.

For instance, the UK has the largest installed capacity of offshore wind in the world, with around 10 gigawatts in operation off its coasts.

The Environment Agency is ready to regulate new nuclear power, including the possibility of Small Modular Reactors.

We're also developing our regulatory role and guidance to meet the new demand in hydrogen, with an ambition to replace natural gas in domestic supply.

And, we are preparing for a range of greenhouse gas removal technologies such as carbon capture and storage, which – when combined with biomass – has the potential for much-needed negative emissions.

Enabling such new technologies will help the Government's levelling-up agenda, as the focus will be on regeneration, and resilience, in industrial clusters up and down the country.

Good regulation provides proof.

For investors to measure the success of projects by their green credentials, they want metrics of the sort provided by environmental regulators.

In markets flooded with greenwash, people want science-based unbiased monitoring of companies' performance.

The 10 point plan for a Green Industrial Revolution calls for over £30 billion of private capital to support the Government's investment by creating investable markets.

Regulation underpins carbon markets by providing accurate and transparent monitoring and reporting which provides assurance that a tonne of greenhouse gas is demonstrably a tonne of greenhouse gas, wherever it is emitted or removed from the atmosphere.

In 2019 we delivered over 98 percent compliance in the 5 major energy efficiency and emissions trading schemes we administer. They cover over 40 percent of the UK's carbon emission from industry, business and the public sector.

Equally, well performing water companies celebrate success in the Environment Agency's Environmental Performance Assessment of the water and sewerage companies, because they know that investors and customers trust its findings when they see them reported in the media.

Good regulation works.

Last week, the Environment Agency's Regulating for People, Environment and Growth 2019 report showed many improving trends in environmental compliance, pollution incidents, crime, and emissions.

In 2019, the Environment Agency stopped illegal waste activity at 940 sites, 3 percent more than the previous year.

In 2019, the number of serious pollution incidents fell 12 percent from the previous year, and waste recovery or reuse at permitted sites has improved to a record 74 percent.

It also showed that emissions of air pollutants have fallen significantly since 2010: nitrogen oxides by 63 percent, PM10 particulates by 34 percent, and sulphur oxides by 81 percent.

Acid rain was a major concern 20 years ago but – as a result of environmental regulation, and over a 90 percent reduction in sulphur oxide emissions from regulated industry – it is no longer a feature of life here.

Good regulation delivers fairness.

Permitting and licensing activities enable businesses to carry out their operations.

Robust regulation provides the level playing field legitimate businesses need to prevent being undercut by irresponsible, or illegal operators.

A central tenet of environmental regulation is that the polluter should pay.

No regulation works unless there is a threat.

Farming is an extremely diverse sector in terms of activities and income.

For the intensive pig and poultry sector – where the Environment Agency can carry out regular visits because we can charge farmers for permits to operate – there were only 4 category 1 and 2 pollution incidents in 2019.

But, pollution problems are rife in the dairy and intensive beef farming sectors. The sectors also contribute around half of the UK agriculture greenhouse gas emissions and ammonia emissions- a key reduction target under the Government's Clean Air Strategy.

These are largely an outcome of the tough economics of the food system, compounded by rising climate impacts.

But, they are now being exacerbated because the Environment Agency lacks the resources to tackle such incidents in diary and intensive beef farming where we have almost 3 times more pollution incidents than we can do proactive regulatory visits to prevent them.

When polluters don't think they will be caught, or have to pay, there is no

deterrent.

At the other end of the economic spectrum there is lack of deterrent for the largest companies in all sectors.

Fines for environmental crimes are disproportionately small compared to, for example, breaches in financial services.

Fines need to hurt.

Even Thames Water's £20 million fine was only ten days' worth of operating profit.

And, I know of one waste company that threw huge legal resources at challenging a fine that amounted to less than one year of the Chief Executive's annual cash bonus.

That is not what a system that puts the environment at the heart of the economy looks like.

Economic turnover penalties are the next natural step if, after fair warning, large companies do not turn around their performance.

This means the most serious breaches by very large companies would be based in the future on a percentage of turnover of the company.

Below this I would like to see the criminal courts apply penalties consistently and proportionately.

Anything less is no deterrent.

Dr Rhian-Mari Thomas, Chief Executive of the Green Finance Institute, said in reaction to The Dasgupta Review on the Economics of Biodiversity:

"So far, the 'E' in ESG [Environmental Social Governance] has primarily been a 'C' for climate, but we cannot solve the climate unless we solve for nature. They are two sides of the same coin. We need to look at nature risk in the same way we do for climate – as a systemic risk to the financial system."

At the Environment Agency we're looking into a range of Nature-Based Solutions as an advisor to industries we regulate.

Activities that lock in carbon – like tree planting, restoring peatland, managing soils, wetlands and saltmarsh – offer decarbonising opportunities in addition to creating resilience to flood risk, supporting biodiversity, and providing health and wellbeing benefits to communities.

The public health costs of air pollution (not to mention flooding, heatwaves and noise pollution) runs into the billions.

Investing in environmental regulation would provide major benefits to the NHS.

The Environment Agency's regulatory work has led to £5 billion of investment from the water companies over five years to improve rivers and groundwater.

The Office for National Statistics says freshwaters, which include surface waters and groundwaters, are worth at least £40 billion to the economy.

In 2019, 98.3 percent of bathing waters on the coast met or exceeded the minimum standard and more than 70 percent were rated as excellent.

Maintaining high quality bathing waters benefits health and wellbeing as well as boosting local economies.

There were 135 million day visits taken to the seaside in England in 2019, worth £5.8 billion to the economy.

The decision to designate the River Wharfe at Ilkley as a bathing water marks a first for England, and we look forward to the challenge of working with partners to improve the river to bathing waters standard.

Today's report from the Aldersgate Group finds that regulations in the construction, waste and automotive sectors have delivered growing business investment in innovation, new products and services, job creation and skills.

It recommends that environmental regulations and standards do not sit in a silo.

To be economically and environmentally effective, environmental regulations should be carefully joined up across sectors, and with the UK's overall industrial strategy.

It says they should promote high degrees of resource efficiency and be accompanied by investment in supporting infrastructure (such as charging points for electric vehicles), research and development, skills and market access.

I agree.

We have everything to gain from realising the strengths of the connections between trade, climate change and nature recovery – in terms of jobs, green goods, services, and technologies.

Tomorrow, in the Budget, the Chancellor is expected to confirm £22 billion to fund a national infrastructure bank that will fund £40 billion of infrastructure projects.

That infrastructure needs to be resilient to climate shocks.

The Chancellor is also expected to confirm the world's first sovereign green savings bond, which will invest £20 million in offshore wind, £70 million in long-term low-carbon energy storage and £4 million to boost the production of green energy crops.

As the economy recovers from the coronavirus pandemic, the investment

community cannot ignore the direction of travel.

In this year of crunch climate negotiations, when the UK Government hosts the G7 and COP26, the race to zero and the race to resilience have already started.

Now, the UK could also fire the starting gun on a global economic race to raise the trillions needed to tackle the climate emergency and restore nature.

But, to underpin this vital trajectory in the UK's fortunes we need strong environmental regulation.

Environmental regulators need to keep in lockstep with economic and financial regulators, outpacing climate change and matching the scale of the challenge.

Environmental regulation – through its example, enforcement, monitoring and metrics – can support profitable green industry here and demonstrate market effectiveness everywhere, so that no country gets left behind in this century of climate opportunity.

But, if the polluter isn't made to pay, that aspiration will wither on the vine.

We will only get the environment the whole country is prepared to pay for.

The Green Industrial Revolution needs strong Green Industrial Regulation.

Thames Water fined £2.3 million for 'foreseeable' pollution

Thames Water has been fined £2.3 million after a stream was polluted by sewage.

A court heard failure to address equipment faults at a sewage-treatment plant in Oxfordshire made the incident "entirely foreseeable".

Sewage with high levels of ammonia was released into Fawley Court Ditch at Henley-on-Thames in 2016, killing 1,144 fish and other water life.

Poor management at the plant was laid bare at Aylesbury Crown Court. Thames Water's treatment works at Henley had no adequate monitoring in place to manage the risk of pollution, made worse by staff not responding to alarms highlighting faults in the process.

Judge Francis Sheridan said Thames Water should have reacted to the warnings "long before" they did. He added the pollution and the events leading up to

it showed “high negligence” by the company.

The first Environment Agency officer on site on 23 April 2016 could smell the sewage in the brown water. Another witness reported a number of dead fish and sanitary products in the stream, near to where the pollution occurred.

The Environment Agency’s investigation showed ammonia levels in Fawley Court Ditch were, at worst, double the permitted limits.

Fish from 13 species died, including chub, gudgeon, dace, roach, perch, tench and pike. The stream took almost a year to recover, having lost almost all its fish to the pollution.

Some of the 1,144 fish killed by the pollution

The court was told a number of faults at the plant had a significant effect on sewage treatment.

Machines to aerate effluent and reduce ammonia totals weren’t working. Probes measuring the standard of the treatment process were also out of order.

Officers found oxygen at the plant that helps control the treatment dangerously low 24 hours before the incident.

Alarms warning of problems were given a delayed response or none at all. Part of the sewage treatment process wasn’t even monitored in the week prior to the pollution.

Jackie Outhwaite, a land and water officer for the Environment Agency, led the investigation:

> Thames Water could and should have prevented this pollution through better management of sewage-treatment.
>
> Our investigation found the risk of pollution was increased by a lack of measures in place to prevent it. Thames Water’s failure to respond to warning alarms ultimately led to significant harm on water quality.
>
> The Environment Agency’s enforcement action over several years and the pressure it has put on water companies has led to £30 billion of investment by the industry in water quality. The damage caused to the environment at Henley, however, shows water companies have a lot more to do to protect the environment.

Sitting at Aylesbury Crown Court on 26 February 2021, Judge Francis Sheridan fined Thames Water £2.3 million, ordering them to pay the Environment Agency’s costs of £87,944.

Thames Water pleaded guilty to one count of causing a discharge of partially-

treated effluent into Fawley Court Ditch and Fawley Court Stream without an environmental permit between 21 and 24 April 2016. It was charged under regulation 12 (1) (b) of the Environmental Permitting (England & Wales) Regulations 2010.

This latest conviction brings the total amount of fines levied against Thames Water since 2017 to £24.4 million for 9 cases of water pollution across Oxfordshire, Berkshire and Buckinghamshire.

UK supports Malawi's energy diversification drive

On Monday, British High Commissioner to Malawi, David Beer, joined Malawi's Minister for Energy Newton Kambala and officials from InfraCo Africa and JCM Power (JCM) in launching the Golomoti Solar, which will deliver 20 megawatts of clean power to the grid, at a ground breaking ceremony in Dedza District.

The project is being undertaken by InfraCo Africa, part of the Private Infrastructure Development Group (PIDG), and its project partner, JCM Power (JCM).

UK Government is pleased to be a partner to this innovative joint financing project by providing, through Innovate UK, a £2.1 million grant to provide state of the art batteries. These will enable the plant to provide reliable power and improve network stability, reducing reliance on hydro and diesel generation, whilst ensuring that grid stability is maintained. In addition, the UK through InfraCo Africa, one of UK's Infrastructure Financing Agencies, is a 25% shareholder to the project through equity financing.

British High Commissioner to Malawi, David Beer, said:

> Malawi urgently needs to develop a more diverse energy supply. This project is a clear marker that renewable technologies are the best route for the country, and shows what commercial and political creativity can achieve. The UK commits to continue being an investment partner of choice for Malawi in such sustainable projects aimed at helping the country build a better and greener future.

InfraCo Africa's Chief Executive Officer, Gilles Vaes, said:

> As part of our commitment to Malawi's renewable energy sector, we are pleased to be working with our partners at JCM to deliver a

> further 20MWAC of clean power to the grid. This key milestone has been made possible by the strong support the project has received from the Government of Malawi, regulators and the state utility, ESCOM. By generating additional power and pioneering energy storage, Golomoti Solar will ensure that homes and businesses in Malawi will have access to more reliable electricity to drive economic growth.

JCM Power's Co-Founder and Head of Africa, Justin Woodward, said:

> During what has been an unprecedented year, this project marks a renewed commitment from all stakeholders that Malawi is an attractive destination for foreign investment. With the addition of batteries, the project will provide the foundation for Malawi to continue to be a regional leader in the renewable energy industry.

20MWac solar photovoltaic (PV) coupled with a 5MW/10MWh lithium-ion Battery Energy Storage System (BESS) Golomoti Solar Project has benefited from knowledge-sharing with its sister project, Salima Solar, with both projects (among the first commercial-scale solar photovoltaic plants in the country) key to transforming regulatory frameworks around Malawi's renewable energy sector. Salima Solar is expected to begin delivering power to Malawi's national grid in early 2021, with Golomoti becoming operational in the latter half of 2021.

Malawi has an electrification rate of just 18%, with only 11% connected to the grid, and frequent power outages affecting economic productivity.

Malawi's energy sector is currently reliant upon hydro power; however, rainfall fluctuations have severely impacted electricity generation in recent years.

The Government of Malawi has recognised energy as a key driver of economic growth in its Growth and Development Strategy (2017-2022) and is working to establish regulatory frameworks needed to attract private sector investment to Malawi's energy sector.

Innovate UK: Energy Catalyst is designed to accelerate the innovation needed to end energy poverty. Through financial and business advisory support, and by building strategic partnerships and uncovering new insights, Energy Catalyst supports the development of technologies and business models that can improve lives in Africa and Asia. To find out more visit: https://energycatalyst.ukri.org/.

Innovate UK is part of UK Research and Innovation (UKRI), a non-departmental public body funded by a grant-in-aid from the UK government. We drive productivity and economic growth by supporting businesses to develop and realise the potential of new ideas, including those from the UK's world-class research base.

Health and Social Care Secretary's statement on coronavirus (COVID-19): 1 March 2021

Good evening and welcome back to Downing Street for today's coronavirus briefing.

I'm joined by Professor Jonathan Van-Tam, Deputy Chief Medical Officer, and Dr Susan Hopkins, from Public Health England and NHS Test and Trace.

Since we spoke on Friday, I'm absolutely delighted that we've reached the milestone of more than 20 million people in the UK getting a vaccine against COVID-19.

It's a magnificent achievement for the country.

First slide please.

As of yesterday, 20,275,451 people have received a jab.

I want to pay tribute to all the teams involved – across the whole of the UK – who are delivering the largest and fastest vaccination programme in British history.

That we've been able to do this – and move so much faster than any other similar-sized nation – has depended on a huge number of people; it is not an accident.

It's down to insight and hard work.

For the last year, we have shared a common mission: to deliver a vaccine, as fast as safely possible.

We've got used to saying thank you to the people who have made this happen.

But I just want to call out a few in particular.

First, the regulator the MHRA – who have remained tough and rigorous throughout but flexible, so it's safety, not bureaucracy they focused on, proving themselves to be, without doubt, the best medical regulator in the world. And we are all very grateful

Next, the Vaccines Taskforce. Their combination of academic excellence, with private sector entrepreneurialism, and civil service grip has forged a team of remarkable capability, which is a model for how governments can get stuff done in the future.

The scientists, the pharmaceutical companies and the armed forces, everyone involved in the delivery effort – from the leadership of the NHS to every local volunteer.

And you, the British people.

For sticking by the rules and for your remarkable enthusiasm to get a jab – it makes me really proud.

Recent figures show 94% of those eligible have said they have either had a jab – or will get the jab when the call comes. 94%.

And this is so important because each and every jab makes us all safer.

Every time a friend sends me a message with a picture of them getting their jab – and they do a lot – I know that we're all one step safer and we're all one step closer to returning to normality.

It is fantastic the enthusiasm that people are showing and we still have a long way to go, so let's stick at it.

Today we have some new data to present on the effectiveness of the vaccine, both its real-world effect we can now see in the data and some new analytical research that we're publishing, which shows how it's saving lives, and this is being published in a paper by Public Health England and others right now.

First, let's look at the real-world data.

Next slide please.

If you look at the number of new cases as we described on Friday the number of new cases is falling but the rate of decline has slowed.

This shows how we all need to keep sticking to the rules.

Let's not blow it now.

However.

Next slide please.

The number of hospitalisations is falling faster.

Even better: among the age groups vaccinated first, the fall in hospitalisations is faster than in the younger age groups who are still yet to get a jab.

This is a sign of the vaccine working.

Next slide please.

But where you can really see it is in the data on deaths – we can see that the number of deaths each day is thankfully falling much much faster than after the first peak, and again, as you can see from this slide, is falling

faster in the over-80s – who got the jab first – than in the under-80s.

Final slide please.

Taken together, this difference in the data – between older and younger groups – shows a 'vaccine gap', you can just see it starting to emerge here over February.

This is a gap between the rate of decline in older and younger groups, the rate of decline in terms of people dying each day, is going faster amongst the over-80s and this shows in the real world, across the UK, right now, that the vaccine is helping to protect the NHS and save lives.

These real-world effects are backed up by some exciting new data that shows that a single shot of either the Oxford-AstraZeneca vaccine or Pfizer vaccine works against severe infection amongst over-70s, with a more than 80% reduction in hospitalisations. This is extremely good news.

In fact, the detailed data show that the protection that you get from catching COVID, 35 days after a first jab, is even slightly better for the Oxford jab than for Pfizer, albeit both results are clearly very strong. Professor Van-Tam is going to set more details in a moment.

These results may also help explain why the number of COVID admissions to intensive care units among people over 80 in the UK have dropped to single figures in the last couple of weeks.

Which is something that I know, we all welcome. This is seriously encouraging, it shows the power of science and what it means for you is that when the call comes – get the jab. The evidence shows it will protect you.

And I can formally announce that we're now inviting the over-60s to be vaccinated.

All part of our national effort to offer everyone the jab by the end of July.

To do that, and to make sure our vaccine programme has the funds it needs to keep up this incredible work, at the Budget on Wednesday, the Chancellor will set out £1.65 billion of new government funding to reinforce our vaccine rollout across all parts of the UK.

As more of us are protected against the virus, we can gradually replace the safety that comes from the restrictions that we have to impose with the safety from the jab.

Part of that funding will go towards further vaccine testing and development to make sure that we are as fast and effective in developing the next generation of COVID vaccines, including vaccines against variants, as we were with the existing ones.

There's a huge amount of work underway to ensure that we can develop vaccines against variants as fast and as safely possible.

Finally, I want to turn to the 6 cases of the variant of concern first identified in Manaus, in Brazil that we have identified here in the UK, 3 in Scotland and 3 in England.

We know that 5 of these people quarantined at home – as they were legally required to do.

We have been in contact with them and their families, and are grateful to them for understanding the seriousness of the situation.

We are putting in place surge testing in South Gloucestershire, as a precaution and I urge everyone to remain vigilant.

One of the 6 completed a test but did not successfully complete contact details.

We are therefore asking anyone who took a test on the 12 or 13 February but hasn't received the result back, to please get in touch by calling 119.

And Susan Hopkins will give more information on this effort in a moment.

We identified these cases thanks to the UK's advanced sequencing capabilities. We know about them because of NHS Test and Trace, and scientists around the world are now working to get ahead of some of the new coronavirus variants, looking at how a third vaccine dose could tackle these evolving mutations – much as we do with flu each year.

But for now, tackling this disease rests with every single one of us.

It's important to remember that, no matter what variant it is, COVID spreads in the same way, through social contact between people.

The steps we can all take to stop its spread are the same.

To stay at home, to take vital steps like hands, face, space, and make sure we observe the basics – letting fresh air in – and keeping to the rules on social distancing.

And that's how we can keep ourselves safe – and protect the people around us.

And if we can do that, as surely as spring follows winter there will be brighter days ahead.

New data show vaccines reduce severe COVID-19 in older adults

Today Public Health England (PHE) has submitted a pre-print of a real-world

study that shows that both the Pfizer and Oxford-AstraZeneca vaccines are highly effective in reducing COVID-19 infections among older people aged 70 years and over. Since January, protection against symptomatic COVID, 4 weeks after the first dose, ranged between 57 and 61% for one dose of Pfizer and between 60 and 73% for the Oxford-AstraZeneca vaccine.

The pre-print article:

- compares the rate of vaccination in symptomatic people aged over 70 years of age who test positive for COVID-19, compared to those who test negative
- compares the rate of hospitalisation in confirmed COVID-19 cases aged over 80 who were vaccinated more than 14 days before testing positive, compared to unvaccinated cases
- compares the rate of deaths in confirmed COVID-19 cases aged over 80 who were vaccinated with Pfizer vaccine more than 14 days before testing positive, compared to unvaccinated cases

In the over 80s, data suggest that a single dose of either vaccine is more than 80% effective at preventing hospitalisation, around 3 to 4 weeks after the jab. There is also evidence for the Pfizer vaccine, which suggests it leads to an 83% reduction in deaths from COVID-19.

The data also shows symptomatic infections in over 70s decreasing from around 3 weeks after one dose of both vaccines.

The new analysis adds to growing evidence that the vaccines are working and are highly effective in protecting people against severe illness, hospitalisation and death.

Dr Mary Ramsay, PHE Head of Immunisation, said:

“This adds to growing evidence showing that the vaccines are working to reduce infections and save lives.

“While there remains much more data to follow, this is encouraging and we are increasingly confident that vaccines are making a real difference.

“It is important to remember that protection is not complete and we don’t yet know how much these vaccines will reduce the risk of you passing COVID-19 onto others.

“Even if you have been vaccinated, it is it is really important that you continue to act like you have the virus, practise good hand hygiene and stay at home.

From this week, the NHS has started to deliver second doses to those people vaccinated first, which will provide higher and longer lasting protection.

Separate studies in healthcare workers show that one dose of the vaccine is preventing people from catching asymptomatic COVID-19 by at least 70%. This will help to reduce the spread of infection in hospitals and care homes, ultimately offering more protection to these vulnerable populations.