

The future for environmental regulation and opportunities for the UK to lead internationally

We need good regulation to meet the challenges ahead.

This summer we have experienced the highest ever temperature, the worst drought since the 1970's and the driest ever July in the south east of the country. Our natural eco-systems and biodiversity are under increasing pressure and threat. We need to be ready for more of these conditions as our climate changes.

We now have increasing public expectations and interest in the environment. The covid pandemic has heightened public awareness and expectations in the environment, undoubtedly leading to wider recognition of the benefits to health and well-being from thriving green and blue spaces.

So, I ask – is our regulatory system up to meeting the challenges? A question not only posed by climate change and moving to a low carbon net zero future, but also the need to become more sustainable, to embed a circular economy and above all to protect people and wildlife.

On the 18th of January, James Bevan our CEO spoke to this Forum on 'How to regulate better after Brexit: Think differently, speak softly and carry a bigger stick'.

He was right; we do need to think differently. Much of our framework for environmental regulation was put in place to manage fossil fuel powered processes and technologies. And here at the Environment Agency we have some ideas on how this needs to change.

In my 25 years as a regulator, I have seen many improvements that regulation can deliver, for example:

Substantial reductions in radioactive discharges to the marine environment so that additional concentrations in the environment are close to zero.

Substantial reductions in pollutants from industry to air – such as oxides of sulphur and nitrogen, particulate matter, greenhouse gases and methane.

The vast majority of the activities we regulate are in compliance with their requirement. We publish details of these activities every year in our annual Regulating for People the Environment and Growth reports.

There is quite rightly a focus on the water environment – and there are success to report, such as: significant investment in water treatment infrastructure, leading to:

Real improvements in bathing water quality with over 98% meeting or exceeding

the required standards, and greater biodiversity in our rivers, as a result of reductions in organic pollution phosphorous and ammonia from monitored discharges.

But... we know that there are still big challenges.

Despite improvements, 86% of our rivers have not reached good ecological status.

In our Water Company Performance report only one third of companies were rated as industry leading, the remaining two thirds were rated as poor or requiring improvement. There is quite rightly considerable public concern on their performance and the state of our rivers. Our Chair has called the sector's performance on pollution 'shocking'.

Monitors on storm overflows, installed at our insistence, show that these operate and spill into our rivers too frequently. This is currently the subject of a major investigation by the Environment Agency.

It's not just water companies, farming is responsible for about 40% of water body failures. It is one of the sectors that causes a large number of serious pollution incidents, there's no point just cleaning-up the water industry to improve water quality; action on pollution and discharges from farms and other polluters is also needed.

Away from water, waste and other environmental crimes continues to be a scourge on society and costing the economy an estimated £900 million per year

The regulatory framework is complicated, in places too prescriptive, and can be slow to adapt as novel risks emerge from changing practices, new chemicals and substances, or as our knowledge and understanding of risks change.

Innovations in areas like healthcare and manufacturing bring their own environmental challenges. Challenges such as anti-microbial resistance, and the ubiquitous presence of 'forever' chemicals requires global solutions, and that's why the EA supports the government as one of the leading countries on the new United Nations Global Science-Policy Panel on Chemicals, Waste and Pollution Prevention.

So, what does future environmental regulation look like?

Whilst, ultimately, this is a question that will be decided by Government, I offer the following:

Regulation for a fossil fuel driven economy may no longer be appropriate as we transition to a low carbon net zero economy. At the Environment Agency we are already supporting businesses who wish to trial the use of hydrogen in their processes or are developing technologies for carbon dioxide capture and storage; we are ensuring that our regulation is fit to support the development of advanced nuclear technologies and fusion in the production of energy.

If we are to deliver the outcomes in the government's 25-year plan and

improve our environment, nature and health and wellbeing, then there is still a role for traditional regulation. There will still be the need to set standards, and targets, limits on capacities and throughputs and the need for restrictions on chemicals and substances.

But there are some 'must haves' to regulation for the future if we are to better support the innovation and technologies that don't yet exist – across healthcare, the food system, energy etc: it must have sufficient scope, be adaptable, fast paced, risk based, outcome focussed. Regulation must have a progressive framework that is flexible and proportionate, and makes it easier to dial up and dial down the level of intervention as the risks and our understanding of the risks change.

There will continue to be innovations in monitoring, analysis and evaluation, which will support the development of sound evidence and inform all aspects of the regulatory cycle, from policy development, and choice of tools through to individual enforcement actions.

Digital, big data and greater use of citizen science, will help regulators better focus on the highest risk activities and concentrate on where we can make the biggest contributions to outcomes, for example:

The Environment Agency are continuing to invest in digital technologies. We already have systems in place for online registrations and fishing rod licences. We are trialling and rolling out a system of e-alerts for water abstraction licence holders, replacing a paper and letter-based system with electronic alerts. Reducing the time it takes from days to minutes when informing licence holders whether they are able or not able to abstract water. Having benefits for both licence holders and the environment.

Sadly, there still needs to be a big stick, to make sure that offenders are held to account. The deterrent for illegal or criminal activities should outweigh any benefits.

Also, the future needs to be about carrots as well as big sticks. If we are to meet our ambitious targets, regulation and regulators need to support and encourage the front runners. Those who have a positive attitude, who want to do the right things and go beyond compliance.

We have been working on a Regulators Pioneer fund funded SEEBEYOND project, with the Food and Drink sector and Cambridge University. Through the SEEBEYOND project we are exploring how to standardise environmental metrics to measure beyond compliance and help harness moral and market incentives to improve environmental performance of the Food and Drink sector, focussing on GHG emissions, waste, water, and materials usage. This is learning that has the potential to be scaled to other sectors and environmental indicator areas over time.

Regulation will need to work with, support and integrate with fiscal and economic instruments, for example the Environment Agency administers a £bn carbon market through its trading schemes.

Environmental and financial regulation must evolve in lockstep. Greening finance creates opportunities for businesses and the financial sector to go beyond compliance to invest in the solutions for climate and nature challenges. To be most effective these investments and the data that supports them should be grounded in science and verified by experts, such as the Environment Agency.

We have been supporting colleagues in the Treasury and Government to develop technical detail for the UK green taxonomy on climate (mitigation and adaptation) and will continue to provide inputs on the four remaining areas of the taxonomy, at the government's request.

Looking outwards and inwards.

Having left the European Union, we have an opportunity to review, renew and reform our environmental law for the better.

In a rapidly changing world, we need to rise to the challenge of regulating emerging industries to support innovation whilst responding to emerging environmental issues to limit environmental harm and maintain public trust.

Regulators and regulations need to work with international standards such as ISO 14001 on environmental management systems and ISO 14090 on Adaptation to climate change and the certification and assurance industry.

We need to continue working with colleagues in the international arena such as the IAEA, OECD, Agile Nations Network, so we can share learning and best practice and better understand what good looks like.

There needs to be a discussion across the breadth of society about risk, costs and benefits, and options, so that regulation continues to work and protect all members of society.

We should not be afraid to rigorously review our regulatory systems and hold ourselves to account; building on our successes, but shining a light where changes are needed. Only by continuing to do so will we deliver the better outcomes for sustainable business, people and the environment.

Environmental regulation has been evolving and developing for the last 170 years, it needs to continue to evolve and develop to be fit for the future. Get this right, and the UK will continue to be a leader in developing and applying good regulation and sharing our lessons, so we not only protect and improve our own environment, but are leaders in environmental protection and improvement across the world.