The work of the Environment Agency

The current priorities of the Environment Agency

The job of the Environment Agency is to create a better place. We do many things to that end, but the two biggest are reducing flood risk and protecting the environment. Following the recent Spending Review we have just got our financial settlement from the government for the next three years, and it will be those two things on which we spend most of our time and money over that period.

We will reduce flood risk by building more new flood defences and maintaining our existing ones; by warning and informing people when flooding threatens; by responding to flood incidents to protect and support communities when it happens; and by providing planning advice to reduce any flood risk from new development.

Flood defence works. Last month the nation faced something we have not seen before – three named storms inside a week. While some 400 properties did sadly flood over that period, our flood defences meant that over 40,000 homes and businesses which would also have flooded did not. And nobody died. Compare that with 1953, when an East Coast storm surge killed over 300 people.

And over the last decade, while storms and rainfall have progressively worsened due to climate change, we have actually seen a reduction in the numbers of properties flooded as a direct result of the government's investment in flood defence. That is why the EA is proud to have completed on time, on target and on budget our last six year flood defence building programme which has better protected 300,000 homes, and why we are now embarking on a new six year programme that is twice the size in terms of cost, more than 50% bigger in terms of the numbers of flood defence schemes we will build, and which will better protect well over 300,000 additional homes and businesses as well as a lot of vital national infrastructure.

As for our other major role, protecting and enhancing the environment, we will do that over the next few years by monitoring the state of our air, water and soils, by regulating the industries which pose the biggest pollution risks, by enforcing the regulations which protect the environment, and by responding to significant pollution incidents to help stop the damage, clear up the mess, identify the cause and if necessary take action against those responsible.

With the new money we have got from the Spending Review we will also step up our efforts to improve water quality, including by increasing the number of inspections of the two main sources of water pollution – farms and sewage works; and by investing in the big water transfer schemes the EA runs which help reduce drought risk.

The impacts of climate change for the UK and the challenges these present

Underpinning everything we do is the biggest issue of our age: the climate emergency.

Climate change is driving heavier and more violent rainfall, which is overloading our sewage systems more frequently, leading to more discharges into rivers; overwhelming urban drainage systems more often, causing more surface water flooding in our towns and cities; raising sea levels, causing higher risks of the most dangerous kind of flooding – coastal flooding; washing more soils into our rivers, damaging farmers' livelihoods and increasing flood risk; washing more contaminants into our rivers, causing greater pollution; and driving hotter temperatures and lower summer rainfall, causing higher drought risk, harm to water quality and death to wildlife.

So if we want to protect and enhance the environment, we need to tackle climate change. The Environment Agency is playing its part in that, by regulating down the emissions of greenhouse gas that cause it, by running the government's new UK Emissions Trading Scheme, by helping communities adapt to the effects of climate change by building more flood defences and by creating places which are more resilient to its effects through our planning role. We are also trying to walk the walk ourselves with our own commitment to make the EA a net zero carbon emitter by 2030.

The challenges and opportunities around tackling water pollution from sewage

Let's start with the state of our waters. The picture is mixed. Some things are better than they were. Largely down to tougher regulation, there are now far fewer serious pollution incidents damaging our waters than three decades ago, sewage treatment works now discharge much lower amounts of harmful chemicals into our rivers, and the bathing waters around our coasts are in the best condition they have been since we started monitoring them. As our waters have improved, nature has recovered. Otters, which were almost extinct by the 1960s due to the pesticides then in our rivers, have now returned to every county of England.

But the state of our waters is not nearly good enough. Only 14% of our rivers meet the criteria for good ecological status, and that figure has stayed the same for the last several years. That's because we are still seeing too much pollution from sewage, farming, industry and road-run off. And some things are getting worse, with new threats to our waters, including microplastics and so-called forever chemicals.

The way to get our water quality to the state we want is to start by recognising that everyone has a role to play. The polluters – largely water companies and farmers – need to obey the law, stop polluting, and pay the full cost of cleaning up any damage they do. The politicians, the public and the media need to keep up the pressure on the polluters to clean up their act. The EA and the other regulators need to regulate robustly and have the

powers and resources to do so. And all of us need to treat water better and use it wisely.

Over the last couple of years the issue of sewage pollution in our rivers has shot up the agenda. Most of the sewerage systems in England are combined sewers: they carry both sewage and rainwater in the form of runoff from roofs and drains. At times of heavy rainfall the system can become overloaded, and that risks sewage backing up into homes and streets or clogging the treatment works. The system is designed to prevent that by discharging diluted sewage to rivers or the sea when the system risks being overwhelmed during heavy rain. But a growing population and climate change means these combined sewers are discharging more often, and people are increasingly reluctant to tolerate that.

What is the EA doing about this? We:

- have set clear limits in the water companies' environmental permits on when they can discharge untreated sewage into rivers or the sea (only in the event of heavy rainfall or snow melt) and specified how much sewage their treatment plants must be able to treat in order to avoid as far as possible discharging untreated sewage in times of high flow.

- monitor the performance of the water companies against these permits, and seek to ensure that they stick to them; have required the companies to put monitors on their overflows and their treatment works, and are making that data available to the public, which is putting more pressure on the companies to clean up their act.

- have prosecuted water companies for the premature operation of overflows, and are now running a major criminal investigation into whether the companies' sewage treatment plants are all complying with the rules, which may well lead to prosecutions. We always press for exemplary sentences where there is significant harm or deliberate intent, and recently secured a record breaking £90m fine against Southern Water.

There are opportunities here. In the long term, to create a better sewage system that does less damage to the environment. In the shorter term, to improve the behaviour of the water companies and enlist public support to ensure that our waters are protected. One idea, put forward recently by the House of Commons' Environmental Audit Committee, is to build a network of citizen scientists to help monitor our rivers and inform the action we take to protect them.

I like the concept. I like the principle it embodies: that all of us are responsible for the state of our waters. I like the practical benefits it could deliver: better understanding, in real time, of what's happening in our rivers allowing us to act better and faster. And I like the way it could do a lot with a little: at a time of scarce resources the way to do things better

with less is do them together. So we are looking at whether we could do something on those lines.

The implementation of the Environment Act and role it will play

The Environment Act came into force in November. It is a good thing. It is one of the main mechanisms to deliver the government's 25 Year Environment Plan, which has at its heart the ambition that we will be the first generation to leave the environment in a better state than we found it.

To help achieve that, the Act requires the government to set long-term legally binding targets for air quality, biodiversity, water, resource efficiency and waste reduction. Those targets will place a legal obligation on government to deliver them. The EA is playing a central role, both in developing those targets and in delivering them.

There are several other important elements of the Act. To cite just two, it requires the Secretary of State to produce a policy statement on environmental principles (polluter pays, etc) to which Ministers must have due regard when making policy; and it establishes the Office for Environmental Protection which will hold the government and other public authorities (including the EA) to account in complying with environmental law.

We welcome these moves, and will continue to work closely with the government, parliament, businesses and NGOs to create the better place for people and wildlife we all want.