

Water is the most important thing there is

Water is about the most important thing there is: it's essential for life and everything else. Water – its quantity and its quality – is the single biggest X factor for the state of nature. And as someone said to me a few years ago, the thing about water is that it gets everywhere. So you'd better make sure you have the right amount, of the right quality, in the right places.

If we want to fix water we need to fix the climate

Let's start with the strategic picture. The biggest determinant of the state of our waters in fifty years won't be what the Environment Agency or Parliament or the government or the water companies do but what happens to our climate.

That's because 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 dangerous coastal flooding; washing more contaminants into our rivers, causing greater pollution; and driving hotter temperatures and lower summer rainfall, causing higher drought risk, damaging water quality and killing river wildlife.

So if we want to fix water, we need to fix the climate. The Environment Agency is playing its part in that, by regulating down the emissions of greenhouse gas that cause climate change, by helping communities adapt to its effects through building more flood defences and by helping create more resilient cities through our planning role. We are also walking the walk ourselves with our own commitment to make the EA a net zero carbon emitter by 2030.

Water quality

Water quality is a big issue.

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.

Some things are flatlining. Only 14% of our rivers meet the criteria for good ecological status, and that number 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.

How do we get our water quality to the state we want? 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 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.

Water quantity

Water quantity – too much or too little – is an even bigger issue.

Let's start with too much. We face a growing risk of catastrophic flooding as the climate changes.

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.

The good news is that over the last decade, while storms and rainfall have progressively worsened, 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 national infrastructure.

But in the face of the climate emergency, building more flood defences is no longer enough on its own. The Environment Agency's new flood strategy which we launched in 2020 sets out a new approach: that in addition to continuing to reduce the risk of flooding by building and maintaining flood defences, which we will, we will also help make communities more resilient to flooding when it does happen so lives are not endangered and life can get back to normal quickly afterwards.

We are doing that through our own flood schemes, which also now include property level protection and natural flood management to slow the flow of water and the impact of flooding; by working with water companies and other utilities and with partners like Network Rail and National Highways to help make the country's infrastructure more resilient; and through our statutory planning role by helping design and build places which are resilient to flooding and other climate shocks.

But the biggest of all risks is not too much water but too little. This is about avoiding what I have called The Jaws of Death: the point on water companies' planning charts some 20 years from now when if we don't intervene, the demand for water in this country will outstrip supply. We face that risk due to a toxic combination of the changing climate making water supply more erratic and increasing demand as our population grows.

There's good news here too. We know how to avoid the jaws of death: reduce demand by using less water more efficiently; and improve supply, including by investing in the right infrastructure. And we have a plan to do that: an initiative the Environment Agency has launched with the water companies, the other regulators and the government, called the National Framework for Water Resources.

This includes hard targets which the water companies have pledged to meet: that the risk of needing severe water restrictions will be limited to no more than 0.2% in any given year; that we will get water consumption down to 110 litres of water per person per day from the current average of 150 litres or more; that water companies will halve leakage, which currently loses around 20% of water put into the public water supply; and develop new supplies through reservoirs and transfers. We are working with the water companies, the other regulators and the government to ensure all this gets done. It's vital that it does, because while good water quality is essential, the right water quantity is existential.