WildFish.

Doing its job?

A report by WildFish on the Environment Agency's role in protecting and enhancing the rivers, lakes and streams of England

REPORT COMPILED BY:

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Foreword

Nick Measham, CEO, WildFish

The Environment Agency (EA) turned 25 years old this April but our waters will not be celebrating. The freshwater aquatic environment is polluted, fragmented and we face a biodiversity crisis with many freshwater species in steep decline or even at risk of extinction, including iconic species such as the Atlantic salmon. We are at a point when business as usual is no longer an option if we are to reverse wilful river damage and habitat destruction.

All monitored waters in England are polluted with toxic and persistent chemicals, including insecticides and herbicides. Millions of hours of untreated sewage flows are still entering our rivers over thirty years since privatisation of the water industry. Over-abstraction cripples rivers with low flows, or dries up watercourses completely. Widespread farm-derived pollution continues despite decades of advice and guidance to farmers as to how to avoid it. On farm pollution, at last we have regulations, but they are useless if they remain unenforced.

Both Government and regulators alike must stop pretending things look better than the rest of us know they really are. And we NGOs need to have the courage to stop going along with much of this narrative.

The system is broken. Our environmental regulator has been made subject to all manner of deregulatory, enforcement-stifling initiatives, all designed to place economic growth above the environment. To make matters worse, Government has starved it of funds, with its dwindling staff confined to barracks and shackled to their desks.

No doubt in response to this report, senior management at the EA and DEFRA will spin a response that the EA is performing wonderfully, and that this report is nonsense. Of course, the EA has had some 'wins', but the failings far outweigh the successes. So I would ask both the EA and DEFRA to think hard before they respond and honestly answer this question - if not the EA, then who protects and restores our freshwaters and, if not now, when?

Those of us on the riverbank - and many of the Environment Agency's own committed staff - know that it is not delivering the protection and enhancement our watery habitats so desperately need, the public demands - and that the law requires. We get the environment we pay for in money and commitment. We are not spending enough of either and it is simply not good enough.

Twenty-five years of the EA

It is a quarter of a century since the EA was established. Now is a good time to ask ourselves if the EA has and is continuing to do the job for the freshwater environment in England. Has it protected and enhanced the rivers, becks, streams and lakes of England, as it was charged with doing by the UK Parliament back in 1995 when the Environment Act was passed with such enthusiasm?

The EA was created by the Environment Act 1995, and came into existence on 1st April 1996 [1]. Therefore, as at 1st April 2021, the EA has been in charge of protecting the environment in England (and initially in Wales [2]) for a quarter of a century. The Environment Act 1995 set out the EA's main aim to protect or enhance the environment, contributing towards the objective of achieving sustainable development. That remains the EA's principal function today.

In relation to the freshwater environment only, the EA is the key regulatory and statutory body charged with protecting waters from pollution or over-abstraction, under a variety of legislation [3]. Many of the EA's specific environmental duties reflect their origins in earlier statutes relating to water, but, in short, the EA is responsible for regulating almost all polluting discharges (whether point or diffuse sources) to controlled waters, including where such pollution occurs as a result of the unauthorised or harmful deposit of waste, agricultural chemicals, discharges of oil from land or escapes from pipelines. It also controls flows by way of limits on the abstraction of water from rivers, lakes and groundwater. It is also the statutory duty of the EA, under section 6(6) of the 1995 Act, as amended, to maintain, improve and develop fisheries.

So how has the EA been doing? Has it protected and enhanced the freshwater aquatic environment? This report looks at the state of the freshwater environment in England, whether the EA has achieved what it should have done and, if not, why not?

The report then makes recommendations as to how the EA's delivery of its principal function, as it relates to freshwater, can be improved.

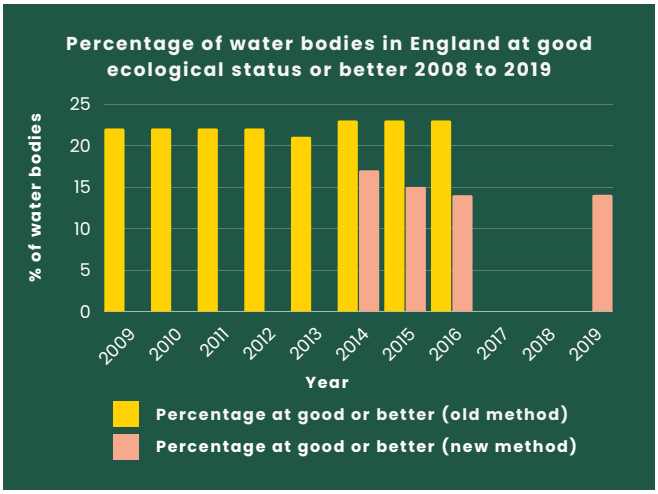
[1] Per the Environment Agency (Transfer Date) Order 1996. The EA took over the roles and responsibilities of the National Rivers Authority (NRA), Her Majesty's Inspectorate of Pollution (HMIP) and the waste regulation authorities in England and Wales. These predecessor bodies were disbanded and all local authorities relinquished their waste regulatory role to the EA.
[2] From 1st April 2013, Natural Resources Wales took over the management of the natural resources of Wales and was formed from a merger of the Countryside Council for Wales, Environment Agency Wales, and the Forestry Commission Wales.
[3] Including EU Directive 2000/60 establishing a framework for Community action in the field of water policy ('the Water Framework Directive'); Directive 91/271 concerning urban waste water treatment ('the Urban Waste Water Treatment Directive'); Directive 2006/7 concerning the management of bathing water quality ('the Bathing Water Directive'); Directive 2006/118 on the protection of groundwater against pollution and deterioration ('the Groundwater Directive'); Directive 91/676 concerning the protection of waters against pollution caused by nitrates from agricultural sources ('the Nitrates Directive'); The Water Resources Act 1991; The Pollution Prevention and Control Act 1999; The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010; The Environmental Permitting (England and Wales) Regulations 2016; The Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018 [Note that where European Directives are listed, post-Brexit, these have largely been brought wholesale into the domestic law of England and Wales].

How has the EA been performing?

The state of the freshwater environment in England

The quality of the freshwater environment is poor and is still nowhere near the good ecological status that was supposed to have been achieved in all water bodies by 2015 [4]. Progress has stalled over the last decade or more. The EA has serious questions to answer over whether it can claim to have been protecting and enhancing the freshwater aquatic environment in England since 1995, which is its legal purpose.

Despite the EA's Chair Emma Howard-Boyd claiming [5] recently that water quality in our rivers is better *"than at any time since the start of the Industrial Revolution"*, the percentage of English rivers reaching good or better ecological status in England is only 14%. That situation has not improved over the last decade. In 2009, 22% of rivers in England had achieved good ecological status [6]. The method of assessment changed in 2014, when, as the EA notes *"the evidence base for status classifications was upgraded"*, but even allowing for the old method of assessment, there has been no progress over time. The graph below, compiled using EA data, shows water bodies achieving good or better ecological status over time [7] and, taken with the latest data, reveals that there has been no progress for over a decade in this overarching measure of the quality of our rivers, lakes and streams.



The EA itself has also reported recently [8] that:

- Over 10% of our freshwater and wetland species are threatened with extinction and two thirds are in decline.
- 18% of chalk river water bodies are impacted by abstraction.
- 26% of groundwater bodies are at poor status and 0.9 million m3 of water per day are needed to recover to good status.
- 56% of sampled sites exceeded two or more biota environmental quality standards in freshwater fish between 2014 and 2018.
- 36% of the pesticides that are monitored for, that are in current usage, have been detected in catchment sensitive farming rivers above a threshold value of 0.1 micrograms/litre on at least one occasion since 2014.
- 40% of water bodies are impacted by pollution from rural areas.
- 2.9 million tonnes of topsoil are lost every year due to erosion in England and Wales.
- 16% of serious pollution incidents in England are attributed to the agriculture sector.
- 25% contribution from agriculture to the total phosphorus load in freshwaters; and more than 50 serious pollution incidents per year occur due to water companies.

In fact, in 2020, only 145 river water bodies are at good ecological status [9].

[4] Subject to what was envisaged would be a limited number of exceptions where progress was technically infeasible or disproportionately expensive to achieve
[5] Letter to the Editor, The Times, 3rd August 2019
[6] EA (2009) National Statistics for River Water Quality – Forthcoming Changes briefing
[7] EA (2018) The State of the Environment; Water Quality
[8] Environment Agency (2019) River Basin Planning: Challenges and Choices Consultation
[9] EA (2021) Written Evidence to EAC Committee 2021 Water Quality in Rivers

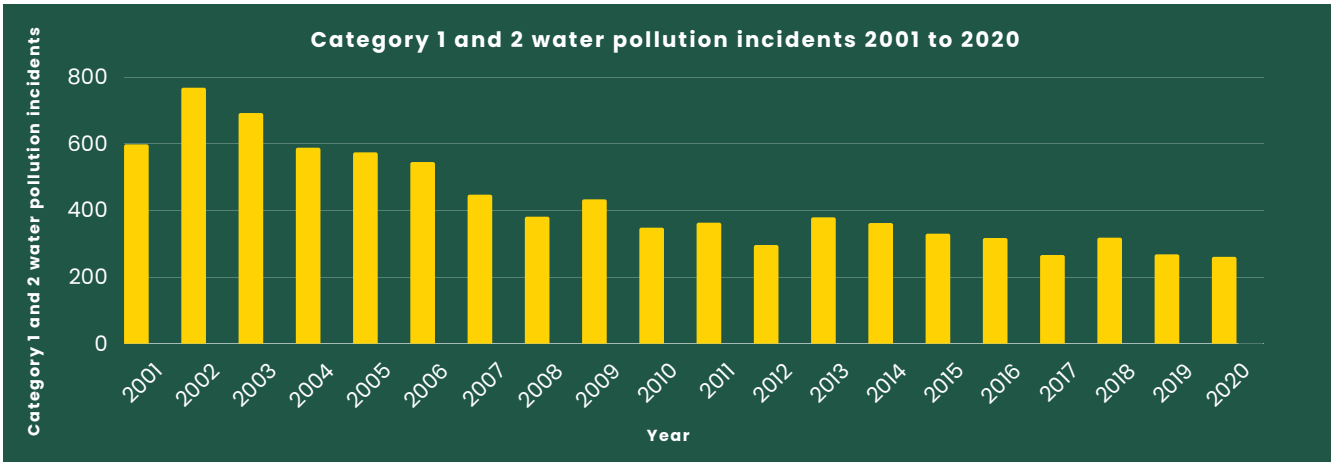
So, 25 years after the EA came into being, and 5 years after the Water Framework Directive (WFD) envisaged good ecological status would be reached in all water bodies (subject to certain limited exemptions), the figures are woeful by any measure.

The state of fish populations too is a clear indication of the EA's failure to deliver on its duties with respect to the water environment. During 2019, the EA reported that it carried out 1,521 fish stock surveys, but that waterbody status for fish, as indicated by those surveys and other data, showed 59% not achieving good or better status. Almost a third were at poor or bad status. Fisheries monitoring to assess the status of migratory fish stocks in English main salmon and sea trout rivers in 2019 show that 39 out of our 42 main salmon rivers are 'at risk' or 'probably at risk'. None were categorised as 'not at risk'. For the 44 main sea trout rivers, 6 were 'not at risk' and 18 'probably not at risk', with 18 rivers 'probably at risk' and 2 'at risk'. While it is the case that salmon in England face issues outside those fresh and coastal waters controlled by the EA, nevertheless, the EA acknowledges, salmon populations in England are increasingly in a critical state [10].

Perhaps one of the EA's main responsibilities to the wider public is that it should, as far as possible, stop pollution events from happening. When these incidents happen, they are categorised by the EA, according to their severity [11]. Initially, there has been some success in reducing the numbers of such incidents. However, even here, the EA has failed to continue the downward trend that existed prior to 2008 in water pollution Category 1 and 2 incidents [12] - the most serious pollution incidents - as shown below. It is also important to consider whether or not the reduced likelihood of EA staff able to attend pollution incidents reported by the public has meant a reduction in those being confirmed as Category 1 and 2 incidents.

In relation to water industry pollution events, in 2013 the EA "wrote to all water companies setting out our expectations on a range of areas", which included "reducing serious (category 1 and 2) pollution incidents, trending towards zero by 2020" and requiring that "there should be at least a 50% reduction compared to numbers of serious incidents recorded in 2012" [13]. That clearly never happened.

Overall, despite a quarter of a century under a statutory duty to protect the environment, the damage being caused by a variety of types of persistent water pollution incidents remains largely unresolved.



[10] EA (2021) Fisheries Annual Report 2019 to 2020 Published 15th January 2021
[11] See, for example, EA (2011) Incidents and their classification: the Common Incident Classification Scheme (CICS) Operational instruction 04_01 Issued 30/09/2011 which defines categories:
Category 1 – major, serious, persistent and/or extensive impact or effect on the environment, people and/or property
Category 2 – significant impact or effect on the environment, people and/or property
Category 3 – minor or minimal impact or effect on the environment, people and/or property
Category 4 – substantiated incident with no impact
[12] Data taken from EA online database of pollution incidents at https://environment.data.gov.uk/portalstg/home/item.html?id=025c69dc15784a2186c3f089c776be5c
[13] Water and sewerage companies' performance 2018 summary July 2019
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/815129/Water_company_performance_report_2018.pdf

Inadequate monitoring

The basis of any strategy to protect and enhance the freshwater environment has to be monitoring, but the EA's monitoring efforts have shrunk considerably over time. There is no longer a coherent and comprehensive picture of the state of the freshwater environment in England, with old data used to plug today's data gaps.

Obligations placed on the EA to conduct environmental monitoring flow from both European law (mostly now retained law post-Brexit) and domestic legislation. While most of the domestic legislation that requires monitoring is merely transposing EU law, not all monitoring obligations are EU-derived. However, the main driver for monitoring of the water environment in the UK as a whole is the WFD.

Article 8 of WFD is the key provision on the monitoring of surface water status, groundwater status and protected areas and required that *"Member States shall ensure the establishment of programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status within each river basin district"*. Article 8 established detailed requirements for the monitoring of surface water status, groundwater status and protected areas.

To re-iterate, monitoring programmes were (and remain post-Brexit) required to *"establish a coherent and comprehensive overview of water status."*

However, expert opinion is crystal clear that the EA monitoring does not give us that coherent and comprehensive overview. The following are just three opinions on the EA's monitoring given in oral evidence to the Environment Audit Committee in March 2021.

OPINION 1: Professor Nigel Watson [14]

"I think Environment Agency officials themselves would acknowledge that there has been some significant reductions in monitoring in recent years. I understand that the 2019 assessment included some data from pre-2016 that was effectively rolled over to fill in some of the gaps. I think we have a very limited picture overall of what the actual situation is".

OPINION 2: Dr Helen Jackson [15]

"A really good example of this is one in about 2013 that was detected by a volunteer monitoring group. The Environment Agency was not able to detect it because its monitoring is rather patchy at best and the volunteer groups often pick up on localised pollution events, whether that is from agriculture or storm overflow drains. They found that this pollutant, which is called chlorpyrifos, I think, wiped out almost all of the invertebrates in that stretch of the stream for a few months before they were able to recover.The current monitoring has some spatial bias, so we are not looking at headwater streams that will then, of course, affect everything that happens lower down in the catchment. It would be that the Environment Agency probably needs more funding in order to be able to do more regular sampling across more time points. Many of the big pollution incidences that are picked up, as I mentioned earlier, are picked up by volunteer groups because they monitor a lot more regularly than the Environment Agency".

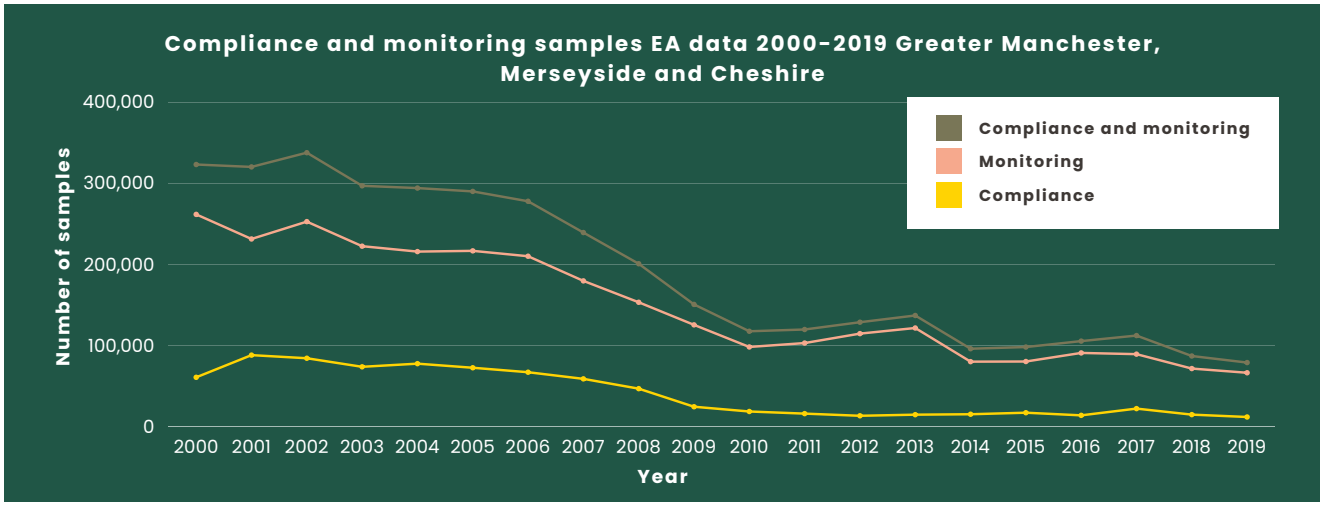
[14] Professor Nigel Watson, Professor of Geography and Environmental Management, Lancaster University, in Oral Evidence to the Environment Audit Committee March 2021.
[15] Dr Helen Jackson, Professor of Freshwater Ecology in the Department of Zoology, Oxford University, in Oral Evidence to the Environment Audit Committee March 2021.

OPINION 3: Professor Steve Ormerod [16]

"There is also a question about whether or not the monitoring is carried out in locations that are appropriate to assess all of the pressures that impinge on the river environment. The Water Framework Directive has always had a problem in that it has tended to miss out on the smaller water bodies, upland headwaters in catchments less than about 10 kilometres square, which are important biologically, they are important for water supply. I would suggest that we need to be augmenting our assessment of the water environment rather than diminishing it and we also should be more representative of all the water bodies that are at risk from different pressures".

In 2018, 4,656 surface water bodies (of all types) were assessed in England. Earlier, in 2015, at the end of cycle 1, that figure had been 5,769 [17] - roughly a 20% reduction in the extent of monitoring over just 3 years. This followed earlier cuts - EA environmental monitoring had already been cut in half between 2013 and 2018 – from samples at 10,797 sites in 2013 to the 5,796 sites in 2018 [18]. Indeed, the introduction of new monitoring data and classification standards in 2014 led to a massive reduction in the total number of water bodies being assessed, with water bodies below the 10km^2 catchment area no longer needing to be included. This tallies with evidence given to the Environment Audit Committee enquiry into UK Progress on Reducing Nitrate Pollution [19] by the EA, that they only monitored 6,000 surface water points each year and that *"resources had become stretched"* [20]. Even before that reduction in monitoring effort, the European Commission had criticised the EA, in its 2009 assessment, for failing to identify the reasons why more than 75% of water bodies in England and Wales were failing to meet European standards for ecological status, which has led to a lack of remedial action being taken. Much of that lack of certainty as to the causes of less than good ecological status still remains today, despite the legal obligations.

An analysis for this Report of EA published data on monitoring (of both types, environmental monitoring and discharge monitoring), below, shows a marked reduction over time, stretching back further to 2000. Analysing just one EA area, selected at random, from the EA's Water Quality Archive (WIMS) database [21], shows that the trend of much reduced monitoring by the EA over time, is both clear and dramatic.



[16] Professor Steve Ormerod, Professor in School of Biosciences, Cardiff University, in Oral Evidence to the Environment Audit Committee March 2021.
[17] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829050/21_Surface_water_status_2019.pdf
[18] https://unearthed.greenpeace.org/2019/environment-agency-water-quality-fears/
[19] House of Commons Environment Audit Committee 11th Report Session 2017-2019 HC 656 22nd November 2018 UK Progress on Reducing Nitrate Pollution
[20] The Environment Audit Committee, when looking at the control of nitrate pollution of water in 2018, noted that:
"102. We were told that the number of tests varied year from year. For example, monitoring activity peaked in 2012–13 due to extensive water quality investigations required for the first cycle of the Water Framework Directive, which informed River Basin Management Plans published in 2015. It also stated that since then it has "refined its monitoring programmes to make them more targeted, risk based and efficient" and aims to "only monitor where additional information is needed to justify improvements and effectively manage pressures on the water environment". The Agency confirmed that the system rested on a mixture of monitoring and modelling. The Agency also said that it was midway through a strategic review of its monitoring, as it was assessing what sort of monitoring it would need to help deliver the Government's 25 Year Environment Plan, though the Agency has previously noted that resources have become "stretched" requiring better use of information, including third party information".
[21] https://environment.data.gov.uk/water-quality/view/landing

An ex-senior fisheries staff member from the EA, in written evidence to the Environment Audit Committee in early 2021, commented on this reduction in monitoring, stating that "most people who have worked in the Environment Agency will point to the major reorganisation in 2002 …. *(as) the beginning of the steady decline in monitoring river water quality and in enforcing the laws designed to protect our rivers* [22].

It is worth noting that the NRA's approach to monitoring was very different. The NRA's 1989 Kinnersley Report [23], written by an expert policy group on discharge consent and compliance in the immediate aftermath of the privatisation of the water industry and the establishment of the NRA, aimed to produce a consent system which was both effective and held public respect. The Kinnersley Report made a number of recommendations which remain valid today, including recommending that *"the scale of sampling effort and other monitoring should all be clear and robust so that no dischargers think that slackness or deliberate malpractice on their part may escape notice".* The Report also stated that *"the NRA has to demonstrate untiring vigilance on every length of river or coastal waters where discharges are made, and the precise limits which each discharger has to achieve must not seem to be in doubt or open to argument."*

Kinnersley also strongly recommended the use of continuous monitoring, stating that, wherever possible, equipment should be used to facilitate this recommendation. Of course, technology has progressed so markedly since Kinnersley that continuous monitoring should now be both practical and affordable for the EA to use widely, both for in-river monitoring and at sites where potentially high-risk polluters, such as sewage treatment works, discharge into rivers. However, in 2021, some 32 years later, it is doubtful whether EA monitoring is anywhere near the scale necessary to continue to encourage would-be polluters to operate within their discharge consents / environmental permits for 100% of the time, as Kinnersley recommended.

The EA does appear to be aware of the issue, but blames lack of funding for the reduction in overall monitoring. Recently, Sir James Bevan, CEO of the EA has stated that *"good regulation also needs to be funded properly. The core environmental principle is that the polluter pays. Those who carry out activities which could harm the environment should indeed pay, both the cost of the regulation necessary to prevent potential pollution from their activities, and the costs of cleaning things up where they do cause environmental harm. And where it isn't possible or fair for individual polluters to pay some of the critical costs of regulation, <u>like monitoring the environment</u> or enforcing the rules, the government should"* [24].

Despite this obvious conclusion, it is clear that wider monitoring of the freshwater environment by the EA is inadequate and, it would seem, hopelessly underfunded by the polluters Sir James Bevan describes.

[22] Written evidence submitted by Gary Cyster MIFM to EAC Committee on Water Quality in Rivers 2021
[23] National Rivers Authority (1989) Discharge Consent and Compliance Policy: A Blueprint for the Future, aka the Kinnersley Report
[24] Sir James Bevan 13 January 2021

CASE STUDY

PESTICIDES FROM SALAD WASHING IN THE HEADWATERS OF THE ITCHEN

Pesticides and sewage discharged from a salad washing factory in the headwaters of the River itchen presented a serious threat to aquatic invertebrate life on a highly protected English chalkstream.

But it took a formal notification of environmental damage made by WildFish in June 2018, pursuant to the Environmental Liability Directive, for the EA to do the work necessary and confirm that discharges from the site at Alresford were threatening the fragile Upper Itchen and Alresford Pond.

The EA's own investigation was only prompted by the results of invertebrate sampling by WildFish at a site immediately downstream of the site's outflows, a task that the EA itself should have been performing.

The EA follow-up investigation ultimately exposed a failing in the factory's own sewage works and a potential pesticide threat to the Itchen Special Area of Conservation and Alresford Pond Site of Special Scientific Interest, caused by traces of pesticides present on the salad leaves which were washed into the Upper Itchen. The site was found to be discharging a cocktail of potentially dangerous pesticides, including the neonicotinoid, acetamiprid.

The WildFish notification highlighted a wider national issue of the EA being unable to look at the impact on wildlife from chronic, low level and cumulative exposure to combinations of different pesticides.

This is directly relevant, not just to salad washing but to agriculture in general.

It was over two years after the formal notification that the EA indicated to the operator that it would impose robust controls on the discharges of salad washing water from the site. This only occurred after the EA allowed prolonged 'trials' of technology to remove pesticide residues from the discharges, during which time the discharges largely continued.

This case revealed structural issues with the EA's discharge permitting and its inability rapidly to deliver environmental protection, even where the evidence is strong. In response, the EA nationally began a review of other permits where fresh or imported produce is washed which may have the potential to discharge pesticides into rivers.

Most importantly, the fact that it took independent in-river monitoring work to identify the root cause of the problem illustrated the effect of the reduced EA's monitoring programme. Whether the issue would have been identified, without WildFish forcing the issue, must be in doubt.

The site has now closed, with the operator deciding not to invest in measures to ensure the site did not cause environmental damage.

Operator self-monitoring - an invitation to cheat?

There is a major question mark over the dependence of the EA on self-reported discharge monitoring data. The lack of independent regulator monitoring of discharges does not create or maintain sufficient deterrent for would-be polluters. The evidence suggests it has led to cheating by the biggest of dischargers at the expense of the environment.

In 2008, the EA introduced operator self-monitoring (OSM) for discharges to water. The essence of this change was that operators of sewage treatment and other potentially polluting discharges would monitor their own discharges, rather than the EA's own staff visiting the discharge and taking their own independent samples.

At that time, the House of Commons Environmental Audit Committee in 2004/5 investigating Corporate Environmental Crime (Second Report of Session 2004–05) noted that *"time and again over the course of our enquiries into environmental crime, it has been brought home to us that unless there is a real threat of being detected, the offender will continue to offend. We cannot stress strongly enough the importance of the threat of detection as a deterrent."*

The EA was warned repeatedly that OSM was likely to cause problems [25]. It might not have been the case had OSM been coupled with frequent and regular audit monitoring by the EA itself, draconian penalties for any failures and with dischargers having the right to OSM withdrawn, but that was not the case.

The results were seen most graphically in the recent widespread failings and cheating in respect of pollution control by Southern Water [see Case Study box]. It is of very great concern that the EA had largely assumed that water companies were playing by the rules at all their sites since operator self-monitoring was introduced, but that was proved dramatically wrong.

In fact, it appears that the water companies have been largely left to police themselves. There are 1444 sewage works in England serving a population equivalent over 2000 people. However, the EA recently acknowledge that *"we do not hold records of inspection data for wastewater treatment works nationally for the period 2010 to 2017 and local records of earlier inspections are either not available in a format that can be used for comparison* ***or are not available at all****."*[26]

In the Thames region, the target for inspecting sewage treatment works was set at once every 8 years, meaning a target of only 34 STWs being inspected in 2017. In fact, the EA only achieved 17 inspections that year.

The EA admits it is over-reliant on water companies reporting their own pollution and breaches, but defends the practice: *"we seek high levels of self-reporting from water companies; where they tell us about their pollution incidents before a member of the public or third party does. This means we and the companies can act early, deploy mitigation measures and reduce the severity of incidents. Self-reporting of pollution incidents by water companies, averaged across the 9 companies, remained at 76%, the same as 2017"* [27]. In other words, nearly a quarter of water company pollution incidents are not reported to the EA by the companies. It is shocking that the EA appears content that one quarter of pollution incidents that are caused by water companies, go unreported.

[25] See, for example, Anglers' Conservation Association's Response to Consultation on 'Risk Based Regulation Of Discharges To Water: Encouraging Better Environmental Performance By Business', February 2007
[26] FOI response Helen Wakeham EA 10th December 2019
[27] EA (2019) Regulating for people, the environment and growth, 2018, October 2019

Given this hands-off approach, it is perhaps not that surprising that the EA recently stated, of water company performance, that *"recent evidence shows there has been a plateauing of overall environmental performance across a range of metrics and in 2018 this showed a downturn. We are concerned about this trend and this… has led the Environment Agency to review our regulation of the water companies. Our Chair Emma Howard Boyd has said we will toughen our regulation and will do more audit and inspection. We are undertaking a programme to develop new and improved ways of ensuring the water companies are held to account for their environmental performance. The initial phase of the programme will complete in March 2020 and will make changes to how we regulate to increase scrutiny of the water company environmental performance"* [28]. As yet, there has been no sign of any impact of the promised changes.

CASE STUDY

SOUTHERN WATER AND OPERATOR SELF-MONITORING

In 2020, a criminal investigation by the EA ended with Southern Water being charged with 51 counts of breaching pollution laws on various dates. Each charge against the company represented months — and in some cases a year's — worth of discharge at 17 different sewage plants [29].

There were deliberate measures taken within the company to prevent samples of wastewater from being taken at treatment works and the widespread use and adoption of improper practices within Southern Water, including at senior management levels, to present a false picture of compliance. The true performance of Southern Water's treatment works was hidden and incorrect data was reported to Ofwat and to the EA. Southern Water's failure to operate its wastewater treatment works properly meant that there had been unpermitted and premature spills of untreated and poorly-treated sewage into the environment.

In 2019, Southern Water was also fined £126m by Ofwat after it was found to have "deliberately misreported data" and manipulated water samples for seven years to 2017 so it could avoid financial penalties [30].

The behaviour of Southern Water had been shocking, no better than fly-tippers dumping waste in the middle of the night. But the door to this sort of behaviour was opened by allowing water companies to monitor and report on their own sewage works, so-called operator self-monitoring.

Contrast this with the NRA's view, per the Kinnersley Report, which noted that *"in our view it is essential that … the scale of sampling effort and other monitoring should all be clear and robust so that no dischargers think that slackness or deliberate malpractice on their part may escape notice…the NRA has to demonstrate untiring vigilance on every length of river or coastal waters where discharges are made, and the precise limits which each discharger has to achieve must not seem to be in doubt or open to argument"*.

In fact, a recent FOI shows that many Southern Water sewage works had never been visited in the ten years since OSM was first introduced. Patently, for years while it cheated the system, Southern Water felt insufficient pressure from the regulator.

[28] FOI response 16th October 2019 Helen Wakeham EA
[29] FT 20th July 2020 Gill Plimmer
[30] Notice of Ofwat's proposal to impose a penalty on Southern Water Services Limited, Ofwat June 2019

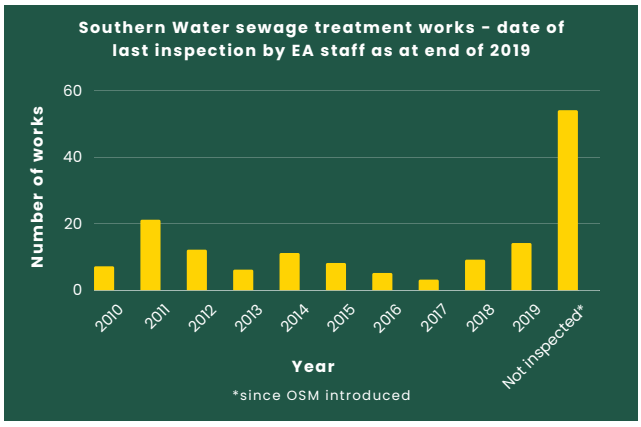
Poor inspection rates

It is undoubtedly the case that inspection rates by EA staff at regulated sites have fallen over time. Farms are highly unlikely ever to be inspected by the EA. With the chance of being inspected so low, the chances of there being more pollution, both point-source and diffuse, is increased, and that means damage to the freshwater environment going undetected.

If dischargers at regulated facilities, including water company sewage works, are not inspected, or those that cause diffuse pollution, including farmers, are unlikely to get a visit from the EA, that should be a concern to us all.

Dischargers need inspection. The law recognises this. For example, the Environmental Permitting (England and Wales) Regulations 2016, per Regulation 34(2) requires that *"the regulator must make appropriate periodic inspections of regulated facilities"*.

However, what the EA has considered 'appropriate' was revealed in an information request made to the EA concerning inspections of Southern Water sewage treatment works in 2019. Indicating the date of the last inspection of all Southern Water sewage works since the introduction of operator self-monitoring, the data showed that a large number of sewage treatment works had not been inspected at all by the EA since the introduction of operator self-monitoring, a decade earlier (the right hand column in the chart below). Many other significant sewage treatment works had not been inspected in the last five years.



It is worth recalling that, back in April 2008, when the EA announced operator self-monitoring would be applied to water company discharges, the then Director of Environmental Protection at the Environment Agency stated that *"the Environment Agency will… undertake formal inspection of all sites to ensure procedures are robust and discharge results are compliant with consents"*. It is difficult to see how the EA has met the commitments it made in 2008, in relation to operator self-monitoring as applied to water company sewage treatment works.

There must also be doubt as to whether, in 2019, the EA had complied with Regulation 34(2) for those regulated facilities that it had not visited in 10 years. When challenged, the EA's response was that *"we set our inspection frequency for WwTW [Wastewater Treatment Works] subject to OSM monitoring as once every 8 years on average, based on risk. Sites with higher risk factors may have more frequent visits while lower risk sites will be inspected less frequently. This explains why some low risk sites may not have been inspected in 10 years"* [31].

But as David Slater, the last Chief Executive of HMIP and Director of Pollution Control at the EA until 1999, has recently observed, polluting businesses have taken advantage of the EA's *"hands-off approach"*, Dr Slater adding that *"you only get compliance if they think the penalties of getting caught are greater than the bonuses of avoiding the cost of compliance"* [32].

It is not clear whether EA inspection rates of non-water compony dischargers, or of those abstracting water from the rivers and groundwaters, have been any more frequent, but it seems unlikely.

[31] FOI response 16th October 2019 Helen Wakeham EA
[32] Quoted in The Times, 23rd October 2020 "Super-polluters: cost of compliance outweighs the risk of being caught".

CASE STUDY

THE EA'S RESPONSE TO THE 2018 FARMING RULES FOR WATER

The EA acknowledged in 2018 that: *"agriculture covers 70% of England and consequently has a large impact on the environment. It currently contributes over 35% of the phosphorus load to rivers. This proportion is expected to increase to about 50% by 2027, as contributions from other sources, mainly sewage treatment works, decrease. It also contributes 50 to 60% of nitrate and 75% of the sediment loads. Poor agricultural practice can result in compacted soils, reducing infiltration and creating more run-off. This transfers top soil with nutrients and pesticides to rivers, and may increase flood risk downstream"* [33].

That was hardly news, so when The Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018 came into force on 2 April 2018 it appeared that, at last, the EA, having the enforcement role under the 2018 Regulation, had the power to address diffuse agricultural pollution that has been so intractable.

To a very great extent indeed, what was laid down in the 2018 Regulations merely reflected what had been recommended to farmers as good agricultural practice certainly since 1991, and in many respects since 1985, including The Code of Good Agricultural Practice (MAFF 1985), The Code of Good Agricultural Practice for the Protection of Water (MAFF 1991), The Water Code – The Code of Good Agricultural Practice for the Protection of Water (DEFRA 1998), The Water, Soil and Air Code: Protecting our Water, Soil and Air and A Code of Good Agricultural Practice for farmers, growers and land managers (DEFRA 2009).

However, the EA has revealed that staff numbers working on the 2018 Regulations is only 27.6 Full Time Equivalent staff (FTE), with these staff also doing much more than just police the 2018 Regulations, even in the 27% of their time making site visits. It is therefore highly likely that the actual FTE, spent exclusively on regulating/ enforcing the 2018 Regulations, is a small fraction of the 27.6 FTE quoted. In the EA's Solent and South Downs area, there were 2 FTEs to cover responding to pollution incidents and all farm visits in 2020. This lack of manpower resulted in farm inspections being dropped completely.

The EA says that, for 2018/2019, they made only 403 farm visits, down from 905 in 2014. Between April 2019 and March 2020, that dropped to 308 inspections undertaken at agricultural premises for assessing various aspects of environmental legislation. In 2016, Defra believed that there were some 106,000 farm businesses, which means that, from the 2018 regs coming into force until the end of 2019, about 0.4% of farms have received a visit, and that dropped further in 2019-2020. At the 2018- 2019 rate, every farm business could expect to receive just one visit in the next 263 years, or by the year 2282.

The overall EA agricultural budget is £650,000 p.a., with only a small fraction is for regulatory visits and enforcement action. Assuming 1/4 of the agricultural budget is aimed at the 2018 Regulations, that would equate to £162,500 pa. Based on 106,000 farm businesses, this equates to about £1.50 for regulating each farm business – woefully inadequate [34].

No wonder therefore that the 2019 Axe Report noted that *"most farmers were aware of the requirement for four months' slurry storage but often admitted to taking a business risk by not investing in infrastructure because there was little regulatory presence of the Environment Agency."*

Contrast this with the efforts made by the National Rivers Authority in 1993:
"A systematic nationwide approach was established in 1993 involving an inspections programme of around 22,000 farm visits for the period 1993 to 1996. The farms are in catchments selected using five criteria: failure to meet set water quality standards, a history of pollution incidents, the risk to water sources, areas of high conservation value and public opinion… Over the last two years the authority estimates it has spent some £10 million specifically on farm pollution activities…" [35].

In the context of decades of failure comprehensively to address pollution from farms, there is little point in the 2018 Regulations if the inspection and enforcement effort being made the EA is so slight.

[33] EA (2019) Regulating for people, the environmentand growth, 2018. Published October 2019
[34] Salmon & Trout Conservation response to Farming Rules for Water Consultation January 2021
[35] NAO report by the Comptroller and Auditor General March 1995 National Rivers Authority River Pollution from Farms in England

Declining responses to public reports of pollution

Responding promptly and robustly to reports of pollution or damage to rivers from the public is key to protecting and enhancing the freshwater environment, but, time and again, reports are that the EA does not respond as it used to, or as the NRA before it did, to reports of slurry, sewage or other damage being caused to rivers. That must be bad for the water environment. Further, if EA staff routinely don't attend incidents, then there must be considerable doubt as to whether the EA can be recording pollution in the correct categories, or at all.

There is a very strong perception from those 'on the riverbank' that the EA does not respond to reports of pollution received from the public, nor attend reported pollution incidents, either at all, or as rapidly as it used to. That is a pervasive and widely-held view among anglers, conservationists and other river-users.

The EA runs a hotline which *"aims to provide the public with a way to complain about incidents they see"*. However, the majority of complaints to the EA's incident hotline are not acted upon, let alone result in sanction, and feedback is frequently not provided even when requested. Information obtained recently under FOI shows that only 3.6% of these complaints – ranging from fly-tipping and pollution to fish kills – resulted in penalties for those responsible [36]. In a typical example, a councillor has criticised the EA recently, describing its response to reports of water pollution in the River Nene as *"lacklustre at best"* [37].

The EA is understood to be planning to implement a controversial overhaul to its pollution response operations as it admits a surge in pollution incidents driven by climate change is *"overwhelming"* its depleted staff, according to documents seen by Unearthed [38]. FOI data reported by Unearthed shows the teams tasked with responding to pollution incidents have seen their numbers decline by 15% since 2015. In future, only pollution incidents determined to be among the most serious will be assigned to environment managers.

The EA gives as reasons for the reduction in its service that *"the workload is overwhelming some of our colleagues and we cannot ignore that"*. Therefore *"we are changing the way we have been handling incident reports so that it is a more positive experience to be a duty officer."* But presumably less so for the aquatic environment? The EA has confirmed that *"all reports of water pollution incidents will continue to be passed on to our environment duty officers 24/7, no matter what the category classification"* and, in a classic of EA double-speak, *"we will never hesitate to take the appropriate action needed"*, but the depleted response to reports to the EA's pollution hotline service remains of very great concern [39].

In fact, this is not a new concern. The EA's responses to reports of pollution have been withering on the vine over many years. In 2006, the EA was reported as stating that there would be fewer attendances at Category 3 pollution incidents, as a result of DEFRA cuts in the EA budget [40]. Move forward to today and it is highly unlikely indeed that any Category 3 incidents will be attended by EA staff at all. Non-attendance by the EA is the norm.

The current performance of the EA here is in stark contrast to the National Rivers Authority which, in 1994, had target response times such that: *"the National Rivers Authority aims to respond quickly to reports of pollution incidents to minimise their impact. Until 1993, regions had their own targets for response time, but these were standardised to within two hours during office hours, and four hours outside that time, and publicised in the authority's January 1994 customer charter"* [41].

As formalised monitoring of the freshwater environment has also been reduced, as above, the EA seems to need all the 'eyes and ears' it can get on the riverbank, which makes the failure of the EA to respond properly to third party reports of pollution all the more concerning.

[36] Response to Liberal Democrat FOI on the Environment Agency's incident hotline. Defra Press Office, 21 July 2020
[37] Cambridgeshire Times 9th March 2021 https://www.cambstimes.co.uk/news/environment-agency-river-nene-pollution-reaction-7815854
[38/39] Unearthed (2020) Leaked documents reveal Environment Agency 'overwhelmed' by staffing cuts and surge in pollution incidents https://unearthed.greenpeace.org/2020/03/07/environment-agency-pollution-flooding-cuts/
[40] ENDS, December 2006
[41] NAO (1995) NRA River Pollution From Farms in England

Weak enforcement and vanishing prosecutions

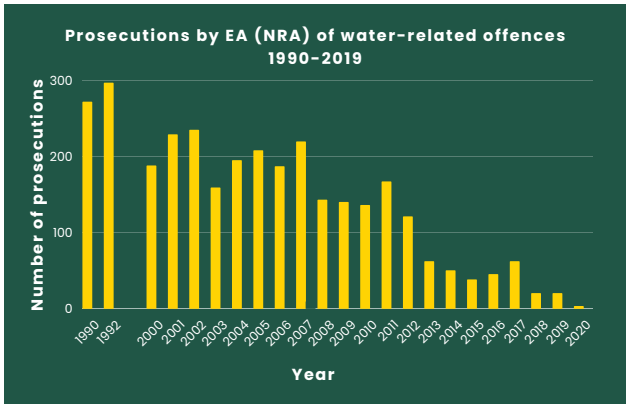
EA prosecution rates have fallen rapidly in recent years, accelerating a trend since NRA days. If those who pollute or damage the freshwater environment feel there will be little or no major sanction (in the unlikely event that the EA has gathered relevant evidence by inspection or monitoring), then there is little deterrent for those seeking to cut corners, be they the smallest farmer or the largest of water companies.

The approach to prosecution taken in 1989 by the National Rivers Authority was very different to that taken by today's EA. The NRA's Kinnersley Report stated clearly that *"it is in the interests of all competent and careful dischargers that the NRA should also be forceful in requiring possible laggards to comply fully with their consent obligations".* Recommendation 29 of Kinnersley was that *"… The NRA must not be regarded as reluctant to prosecute in situations where significant pollutions occur and relevant evidence is available".*

Despite the obvious deterrent effect of prosecution, the number of prosecutions conducted by the EA has fallen dramatically over time. The graph below is the result of an analysis of the prosecution database published by the EA [42].

The data has been sorted to include only those water-related offences with NRA prosecution data, pre-1995, included for comparison.

It might be argued by the EA that the fall-off in prosecutions is a result of the introduction of civil penalties for water pollution offences.



However, even before the introduction of civil penalties to EA offences in 2012, there is a clear downward trend in the number of water-related prosecutions being undertaken by the EA. Indeed civil penalties were only made available to the EA under The Environmental Civil Sanctions (England) Order 2010.

Since then, enforcement undertakings have provided the civil remedy of choice for dealing with some pollution offences [43].

However, FOI data provided by the EA in March 2021 shows that for water-related offences, since 2011, no restoration notices or stop notices have been issued. There have been only 12 Fixed Monetary Penalties and 3 Variable Monetary Penalties issued.

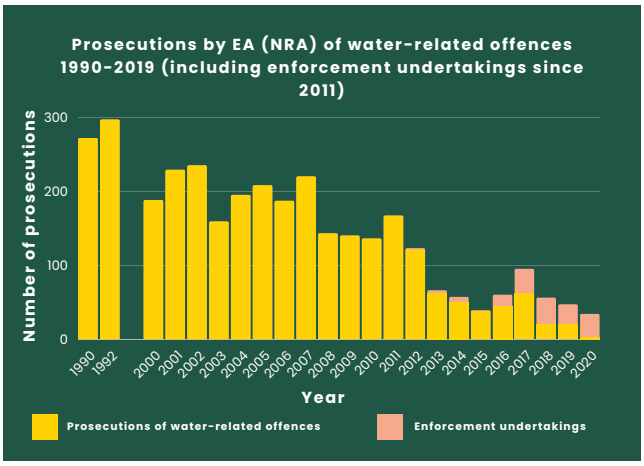
Nor can the use of Enforcement Undertakings explain away the fall off in prosecutions.

Water-related civil sanctions imposed or accepted by calendar year 2011-2020

YEAR	RESTORATION NOTICES	FIXED MONETARY PENALTIES (FMPs)	VARIABLE MONETARY PENALTIES (VMPs)	STOP NOTICES	ENFORCEMENT UNDERTAKINGS (EUs)
2011	0	0	0	0	0
2012	0	5	0	0	2
2013	0	3	0	0	4
2014	0	0	0	0	7
2015	0	1	1	0	1
2016	0	1	0	0	15
2017	0	0	0	0	33
2018	0	0	0	0	36
2019	0	1	0	0	27
2020	0	1	2	0	31

[42] https://environment.data.gov.uk/portalstg/home/item.html?id=7525a61d04ca49089d9857df7c49f06c
[43] Enforcement undertakings may be accepted from those who may have committed an offence (except where a prosecution or monetary penalty is required in a particular case). They are legally binding voluntary agreements whose terms will normally contain an element of restoration as well as steps to ensure future compliance.

Adding the data for Enforcement Undertakings to that for prosecutions shows categorically that the steep decline in EA prosecutions for water-related offences cannot be explained by the introduction of enforcement undertakings in 2011.



Further, as Browne Jacobson, a leading solicitor often acting for regulated bodies have noted: *"Enforcement undertakings are… attractive to companies as they avoid the expense that is associated with a lengthy trial and criminal prosecution, as well as the steep fines and associated legal fees that companies can receive as a result of being found guilty of an environmental crime. Payments under an Enforcement Undertaking can be as large as those under a prosecution, however the key difference is that the company does not have to pay for the significant legal costs associated with taking a case to court".*

Further advantages to the regulated persons guilty of an environment offence are that *"directors of companies may also prefer an Enforcement Undertaking because it avoids them of being held criminally responsible. Accordingly it avoids the risk of imprisonment and orders such as disqualification orders".*

Browne Jacobson argue that enforcement undertakings *"may not dissuade companies from damaging the environment in the future as the payments required under an Enforcement Undertaking may be relatively small compared to their available funds. In addition, the payments made under an Enforcement Undertaking are used to repair the environmental damage, which is something that the company may have decided to do in any event."*

Or indeed should often be required to do, in any event, under the Environmental Liability Directive.

"Regulators need to be mindful of individuals or companies that may seek to agree Enforcement Undertakings as a way of escaping the potentially more damaging effects of a prosecution. Those that have the financial strength to pay the large payments associated with an Enforcement Undertaking may not be incentivised to comply with their environmental obligations in the future. The purpose of environmental legislation, such as the Environmental Protection Act 1990, is to protect the environment by stopping businesses allowing damaging activities such as unauthorised discharges to take place. It is not to simply place a cost on doing environmental harm. It is important that the number of environmentally damaging events reduces not increases.

By prosecuting environmental offences courts can in certain situations impose custodial sentences on individuals such as directors responsible for causing the environmental harm. They can also disqualify responsible individuals from being directors. These actions are more likely to encourage businesses to take steps to avoid environmental harm, even when financially it would be more cost efficient to pay the fine than resolve underlying issues which result in the environmental damage.

Sometimes a successful prosecution is the only way to force a business or encourage other businesses to invest sufficiently to stop environmentally damaging events occurring" [44].

Post-2013, by any yardstick, the reduced number of prosecutions, even if there has been some use of enforcement undertakings, will have seriously reduced the 'threat' felt by would-be polluters and others who might damage the freshwater environment.

[44] The rise of the Enforcement Undertaking for environmental crime – a force for good? Browne Jacobson 17th December 2018

CASE STUDY

RIVER AXE AGRICULTURAL POLLUTION

From 2016 to 2019, the EA conducted a catchment regulatory project in the River Axe catchment [45]. As the EA acknowledges, the River Axe Special Area of Conservation is in unfavourable condition and is declining, owing to nutrient enrichment and sediment pollution that had led to a number of ecological problems including habitat loss and loss of fish species, resulting from intensification of dairy farming and associated maize growing for fodder as well as for energy production.

Over the three years of the project, the EA carried out 86 farm audits. The EA concluded that *"despite over a decade of advisory visits in the period up to 2016, the catchment continued to decline and there were no significant improvement in farming practices. 95% of farms did not comply with storage regulations and 49% of farms were polluting the river Axe."*

The EA also added that *"to maintain these improvements dedicated EA officers, with the skills to engage farmers will be needed. Having secured investment in basic infrastructure further regulatory improvements could be gained by focusing on wider land management in the catchment…The approach taken in this catchment could clearly be transferred to other priority catchments in the country to generate similar improvements for relatively small regulatory investment".*

However, the history of pollution on the Axe was not new, nor was this the first indication that agriculture in the Axe catchment was causing harm to the River Axe and needed addressing.

Earlier perspectives on water quality in the Axe catchment were provided in two reports, Water Quality in the Axe Catchment (Smith, 1996) and Phosphorus and River Ecology (English Nature/Environment Agency 2000) which highlighted the fact that diffuse agricultural run-off was a significant issue in the Axe catchment and was peaking between December and March each year, with potentially serious impacts on the development of salmonid eggs and alevins. Even earlier "egg box" bioassay studies undertaken by the NRA had already empirically shown the problems in the Axe of poor salmonid egg hatch rate in relation to sediment and/or poor water quality [46].

Earlier still, the NRA Catchment Management Plan in 1996 [47] had concluded that *"farm pollution has been a major factor affecting water quality in the River Axe Catchment and is still considered to be a factor limiting the recovery of the salmon and trout fishery. A considerable number of farms have been visited (approximately 400 since 1989) in order to prevent pollution. Detailed studies have also been carried out in the River Yarty sub-catchment to identify causes of poor water quality…we have set water quality objectives to protect the salmonid fishery use throughout the catchment….long term objectives of the highest water quality class for river stretches (RE 1) have also been set which should provide the primary spawning location for salmonids. We will be using all our powers and influence to ensure these objectives are achieved…"*

The solution, said the NRA, included work to *"enforce pollution legislation where appropriate, work with others to target these river stretches to promote the uptake of less intensive agricultural schemes…"*

Twenty-five years later, it is clear that the EA has singularly failed to achieve those long-term targets that the NRA identified in its final year.

[45] River Axe N2K Catchment Regulatory Project Report Author: John Cossens EA November 2019
[46] Report for South West EA in 2000
[47] NRA (1996) Rivers Axe and Lim Catchment Management Plan Consultation Report

Why has the EA been performing so poorly?

It would be incorrect to blame the EA's front-line staff for the reduced inspection, reduced attendance at pollution events, reduced monitoring of both receiving waters and of discharges, and reliance on self-monitoring and self-reporting by would-be polluters and softer enforcement with fewer prosecutions. In most cases, their hands are tied.

The truth is that the EA has been progressively made subject to restrictions on how it operates. It has been presented, over time, with many novel legal strictures that have acted to reduce the strength of its regulatory activities. It has had its central budget cut and has not been allowed by Government to raise sufficient funds from those it regulates, despite successive Governments paying 'lip service' to the polluter pays principle. Numbers of EA staff dedicated to environmental protection have been cut year-on-year.

The pernicious effect of deregulation, guidance and codes on the EA

Since it was set up in 1995, the EA has been made progressively subject to constraints on its ability to deliver its principal statutory function – protecting and enhancing the environment - with a number of Acts of Parliament and Codes and Guidance issued under those Acts by central Government, aimed at delivering a deregulatory agenda, prioritising economic growth, reduced costs and reduced regulatory burden for business, at the expense of the environment. In short, the EA largely only applies the lightest of light touch regulation to those who might pollute or otherwise damage the freshwater environment, because it has been told to, or required to, by Government.

While the EA is a non-departmental public body, which is supposed to bring it a degree of autonomy from central Government, it is sponsored by DEFRA and is subject to guidance issued by the Secretary of State under section 4 of the 1995 Act [48], as well as other codes and guidance issued by Government. The EA is also subject to statutory direction by the Secretary of State under section 40 of the 1995 Act. The Secretary of State is therefore responsible for and can control overall policy of the EA on the environment and sustainable development.

DEFRA also exerts very strong financial control over the EA. It approves the EA's budget and payment of Government grant to the EA for its activities in England, and approves the EA's regulatory and charging regimes [49]. Despite its legal capacity to charge for its services and to pass the costs of its regulatory roles to those it regulates, the EA has remained dependent on central Government for Grant-in-Aid funding. Such Grant-in-Aid requires the prior approval of the Treasury, per section 47 of the 1995 Act and that Grant-in-Aid (other than for flood defence work) has withered over time.

The EA, from the outset, has also been required, under section 4(1) of the 1995 Act, to take into account costs in anything it does. The devil-in-the-detail, contained in section 56, is that "costs" were defined in the 1995 Act as including "*costs to any person*" as well as "*costs to the environment*".

[48] Section 4(2) of the 1995 Act provides that the Secretary of State "shall from time to time give guidance to the Agency with respect to objectives which the Secretary of State considers it appropriate for the Agency to pursue in the discharge of its functions". Section 4(3) of the 1995 Act requires that such guidance must include guidance "with respect to the contribution which, having regard to the Agency's responsibilities and resources, the Secretary of State considers it appropriate for the Agency to make, by the discharge of its functions, towards attaining the objective of achieving sustainable development".
[49] Although the EA has the power under the 1995 Act to fix and recover charges for services and facilities provided in the course of carrying out its functions, these are subject to central Government approval.

So, in respect of polluting factories, inadequate sewage works and CSOs, over-abstraction of rivers and polluting farms, the law requires the EA to take into account the costs of exercising its powers on the same polluting industries, water companies, those abstracting water and farmers, that it seeks to prevent from causing environmental damage.

It is worth contrasting the EA's position here with that of the National Rivers Authority that, prior to 1996, regulated the aquatic environment. Section 2 of the Water Resources Act 1991, much of which was repealed by the 1995 Act, provided for the NRA's functions, per section 19, *"to conserve, redistribute or otherwise augment water resources in England and Wales and secure the proper use of water resources in England and Wales";* per section 84, *"to ensure, so far as it is practicable, that water quality objectives specified for any waters are achieved at all times and to monitor the extent of pollution in controlled waters";* and per section 114, *"to maintain, improve and develop salmon fisheries, trout fisheries, freshwater fisheries and eel fisheries"*. It was also the general duty of the NRA, *"to such extent as it considered desirable, generally to promote (a) the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and of land associated with such waters, (b) the conservation of flora and fauna which are dependent on an aquatic environment; and (c) the use of such waters and land for recreational purposes".*

Like the EA, the NRA was subject to ministerial directions *"of a general or specific character"* with respect to the carrying out of the NRA's functions. A similar power was given to the Secretary of State with respect to the EA by way of section 40 of the 1995 Act.

However, what was new in 1995 for the EA, as compared to the NRA, was section 39 - General duty of the new Agencies to have regard to costs and benefits in exercising powers. Under section 39, the EA, in everything it did, was required to *"take into account the likely costs and benefits of the exercise or non-exercise of the power or its exercise in the manner in question".* There was no such duty on the NRA.

Moving forward to 2002, DEFRA issued the EA with statutory guidance [50] which reiterated that *"the Agency is required to take into account any likely costs in achieving its principal aim, and to take account of the likely costs and benefits in exercising its powers. This includes both costs to people and organisations, and costs to the environment".* The EA is given its priorities - *"the Agency, like all public bodies, operates in a resource constrained environment, and, where hard choices need to be made, the priorities set out in this guidance will be an important factor in influencing the Government's strategic decisions, including in relation to the Agency's resources"* [51].

The 2002 guidance also emphasised the contribution the EA was to make to the Government's wider objectives, giving the EA the role *"to protect or enhance the environment in a way which takes account (subject to and in accordance with the 1995 Act and any other enactment) of economic and social considerations".* It also made explicit that *"the Agency's work can have major social and economic as well as environmental consequences. The Agency should develop approaches which deliver environmental requirements and goals without imposing excessive costs (in relation to benefits gained) on regulated organisations".* The EA was required to *"follow better regulation principles"*.

What this means in practice can be seen later in the 2002 guidance where, for example, the EA is required to *"set permit conditions in a consistent and proportionate fashion … taking into account all relevant matters including sectoral and site-specific compliance costs".* In effect, the guidance issued to the EA in 2002 was, and remains, shot-through [52] with implicit compromise, that the costs to those that the EA might seek to control and regulate, in order to protect and improve the environment, should weigh heavily on and constrain what the EA decides to do.

Since the 1995 Act and the 2002 guidance, the EA has been subject to wave upon wave of deregulatory measures aimed at clipping its wings, starting with the Legislative and Regulatory Reform Act 2006, the aim of which

[50] DEFRA (2002) The Environment Agency's Objectives and Contributions to Sustainable Development: Statutory Guidance by the Secretary of State for Environment, Food and Rural Affairs December 2002
[51] Para 1.8 of that 2002 Guidance
[52] The 2002 Guidance referred to "Better regulation" and required, at para 5.2, that "the Agency should have regard to the five principles of good regulation as set out in Cabinet Office guidance: transparency, accountability, proportionality, consistency and targeting" and that "any enforcement action should be proportionate to the risk, and alternatives to formal enforcement action should be considered. Where the Agency has discretion as to the manner in which it implements regulatory regimes or requirements, it should have due regard to the impact on competition in markets. It should provide adequate and timely guidance to regulated companies on any new duties contained in new legislation".

was to reduce the regulatory burden on the economy. The 2006 Act was inspired by suggestions made by the Better Regulation Task Force in its 2005 report entitled *'Less is More: Reducing Burdens, Improving Outcomes'.*

That Report discussed the use of alternatives to permitting that *"might achieve the same environmental outcomes"* that *"may also result in lower administrative burden and increase flexibility for business".* It emphasised that *"the government needs new mechanisms to reduce the administrative burden and the total quantity of regulation that businesses and others face".*

Section 21 of the 2006 Act required that the EA's regulatory activities should always be carried out in a way which is transparent, accountable, proportionate and consistent, and that they should be targeted only at cases in which action is needed [53].

This opened the door for those sectors of the economy being regulated by the EA to argue that any robust or punitive enforcement activity, or stringent permit conditions that the EA might seek to apply, were not proportionate. The EA was being made to negotiate with polluters and those who might harm the freshwater environment, with one hand tied tightly behind its back. As Sir John Harman, then Chairman of the EA, commented *"we are having to resist pressure to remove regulations simply because it is not convenient for business."*

Indeed, at around the same time, the Hampton Report [54], commissioned in the 2004 Budget, had laid out an ambitious programme to reduce the burdens on business created by regulatory systems, which further weakened the EA's hand.

The Hampton Report set out a series of principles which it recommended all regulators, including the EA, should adopt, which included that *"no inspection should take place without a reason…All regulations should be written so that they are easily understood, easily implemented, and easily enforced, and all interested parties should be consulted when they are being drafted… Businesses should not have to give unnecessary information, nor give the same piece of information twice…Regulators should recognise that a key element of their activity will be to allow, or even encourage, economic progress and only to intervene when there is a clear case for protection… When new policies are being developed, explicit consideration should be given to how they can be enforced using existing systems and data to minimise the administrative burden imposed".*

Then came the Regulatory Enforcement and Sanctions Act 2008, which implemented the Macrory Review [55] on a sub-prosecution set of sanctioning tools that were to be consistent with the risk-based approach to enforcement outlined in the Hampton Review. Macrory had tried to 'hold the line'. specifically acknowledging the utility of *"the public stigma that should be associated with a criminal conviction".* However, doubt remains that the range of new sub-prosecution sanctions were really required. Prior to the 2008 introduction of sub-prosecution sanctions, the EA had the ability to use cautions instead of full-blown prosecutions. As Macrory acknowledged, albeit just in a footnote, *"many regulators including the Environment Agency can issue Cautions. These are formal written admissions of guilt which obviate the need for a prosecution".* However, as the Government put it at the time *"currently, many regulators are heavily reliant on criminal prosecution as the main sanction should industry or individuals fail to comply with regulatory requirements"* [56].

The EA were therefore given, and expected to use, a range of sub-prosecution sanctioning powers [57] such as fixed and variable monetary penalties, compliance, restoration and stop notices and enforcement undertakings.

Unsurprisingly, the EA has become inclined to apply these civil penalties to water pollution offences that, prior to 2008, would have been prosecuted. Collectively, these have acted to downplay and demote the seriousness of pollution and other offences that damage the freshwater environment, by removing the helpful stigma of prosecution.

[53] The Legislative and Regulatory Reform (Regulatory Functions) Order 2007 applied section 21 to all the EA's regulatory functions.
[54] Reducing Administrative Burdens – Effective Inspection and Enforcement (the Hampton Report) March 2005
[55] Regulatory Justice: Making Sanctions Effective Final Report November 2006 Professor Richard B. Macrory
[56] Regulatory Enforcement and Sanctions Act 2008 Explanatory Notes
[57] The 2008 Act and the Environmental Civil Sanctions (England) Order 2010 and the Environmental Civil Sanctions (Miscellaneous Amendments) Regulations 2010

More recently still, the Regulators' Code came into effect on 6th April 2014 [58]. This followed Lord Heseltine's independent report from 2012, *'No stone unturned: in pursuit of growth'*, which recommended that the Government should impose an obligation on regulators to take proper account of the economic consequences of their actions. The Regulators' Code was intended to deliver *"a flexible, principles-based framework for regulatory delivery that supports and enables regulators to design their service and enforcement policies in a manner that best suits the needs of businesses and other regulated entities"* [59].

The Code applies to EA, including *"when developing policies and operational procedures that guide their regulatory activities"* and that *"when setting standards".*

Relevant constraints placed on the EA by the Code include that regulators *"should avoid imposing unnecessary regulatory burdens through their regulatory activities and should assess whether similar social, environmental and economic outcomes could be achieved by less burdensome means"* and *"when designing and reviewing policies, operational procedures and practices, regulators should consider how they might support or enable economic growth for compliant businesses and other regulated entities, for example, by considering how they can best…understand and minimise negative economic impacts of their regulatory activities…minimising the costs of compliance for those they regulate".*

Regulators should also provide *"an impartial and clearly explained route to appeal against a regulatory decision or a failure to act in accordance with this Code", "a timely explanation in writing of any right to representation or right to appeal"* and *"clearly explained complaints procedures, allowing them to easily make a complaint about the conduct of the regulator".*

Regulators should also *"consider risk at every stage of their decision-making processes, including choosing the most appropriate type of intervention or way of working with those regulated; targeting checks on compliance; and when taking enforcement action".*

Regulators should publish a set of clear service standards including *"their approach to checks on compliance, including details of the risk assessment framework used to target those checks as well as protocols for their conduct, clearly setting out what those they regulate should expect; Including inspections, audit, monitoring and sampling visits, and test purchases".*

Perhaps one of the most important stipulations in the Code is that the EA *"in responding to non-compliance that they identify…should clearly explain what the non-compliant item or activity is, the advice being given, actions required or decisions taken, and the reasons for these"* and that they *"should provide an opportunity for dialogue in relation to the advice, requirements or decisions, with a view to ensuring that they are acting in a way that is proportionate and consistent".* The Code only disapplies this *"where the regulator can demonstrate that immediate enforcement action is required to prevent or respond to a serious breach or where providing such an opportunity would be likely to defeat the purpose of the proposed enforcement action"*. So, in effect, the EA must be able to demonstrate that immediate enforcement action is required to prevent or respond to a serious breach if it is to go down the route of a 'traditional' robust enforcement response. If it cannot, then it would lay itself open to legal challenge for failing to act in accordance with the Code drawn under the 2006 Act.

Unsurprisingly, the Code has contributed to the overall chilling effect on the deterrent presented by the EA to would-be polluters and those who might damage the freshwater environment.

Most recently, the Deregulation Act 2015 has imposed a duty on the EA to have regard (in the exercise of its functions) to the desirability of promoting economic growth [60]. This followed the 2012, *Focus on Enforcement* review, which had asked businesses to tell Government where it thought enforcement could be improved, reduced or done differently:

"Focus on Enforcement gives all businesses, but especially smaller and medium sized firms that often feel the disproportionate weight of inspection and compliance, the chance to make a real difference to the way

[58] By Order made under section 24(2) of the Legislative and Regulatory Reform Act 2006
[59] Department for Business Innovation & Skills Better Regulation Delivery Office (2014) Regulators' Code
[60] The Economic Growth (Regulatory Functions) Order 2017 expressly applied section 108 of the 2015 Act to the EA.

regulators visit, inspect and advise business and enforce the law" [61].

Perhaps unsurprisingly, given the biased premise of the consultation exercise, the *Focus on Enforcement* review found that businesses reported experiencing inconsistent or disproportionate enforcement decisions. In response, the Minister issued guidance under 2015 Act [62] on how regulatory functions are exercised by the EA so as to promote economic growth and how the EA can demonstrate compliance with that duty. That guidance, issued in 2017, [63] is concerned with *"freeing businesses from needless regulation"* and is designed *"to assist regulators in fulfilling their new responsibilities, both at a strategic and operational level, including the proper consideration that must be made before allocating resources, setting enforcement policies, and making sanctioning decisions".*

The EA's activities *"relating to the securing of compliance with, or the enforcement of, requirements, restrictions, conditions, standards or guidance which relate to an activity"* are subject to the guidance aimed at *"ensuring that [the EA] understand[s] … the likely impact of their activities on those businesses, particularly in respect of growth… ensuring that they are acting only where needed…. and applying their understanding of their business community and individual businesses they regulate in order to ensure that their actions are proportionate".* Further *"regulators should ensure that their officers have a level of understanding of the business environment, their business community, individual businesses, and the impact of regulator activities on them that is appropriate to their duties and responsibilities, enabling them to deliver a risk-based, proportionate approach in their day-to-day activities".*

The guidance also says that *"certain enforcement actions, and other activities of the regulator, can be particularly damaging to the growth of individual businesses. These include, for example, enforcement actions that limit or prevent a business from operating; financial sanctions; and publicity, in relation to a compliance failure, that harms public confidence… Regulators, therefore, should ensure that their enforcement policy sets out clearly the hierarchy of their enforcement actions and the factors that guide their use, so that their interventions are deployed in a proportionate manner on a day-to-day basis".*

"Regulators should, where appropriate, follow the principle that enforcement action is a last resort and they should help businesses first".

In demonstrating regard for the growth duty, the EA is also required to ensure that all its staff feel the weight of the 'growth duty' - the EA *"should have in place mechanisms to ensure that their officers are applying their understanding of the business environment and of individual businesses in order to deliver a risk-based, proportionate approach in their day-to-day activities".*

Therefore, by law, the guidance now influences and governs, in a very pervasive way, the policy and day-to-day activities of the EA [64]. The EA has no choice in the matter. That is the law.

Unsurprisingly, all of the above is then reflected in the EA's current Enforcement and Prosecution Policy [65]. On prosecutions for example, it states that: *"the decision to prosecute is not taken lightly. We will be sure there is sufficient evidence - we must be sure of a realistic prospect of securing a conviction (and that) it is in the public interest to commence criminal proceedings…Even then, we will consider if a different response is more appropriate".*

So, taking that logically, the EA will consider and may decide not to prosecute, even where there is sufficient evidence and it is in the public interest to commence proceedings.

More generally the Policy says the EA will *"act proportionately"* and *"…take account of and balance the…impact on the environment, people and legitimate business, cost of taking enforcement action against the benefit of taking it, (and the) impact on economic growth".*

It is then easy to see how the EA might decide not to take a robust approach with a polluter or other threat to the freshwater environment, if employment or the financial viability of the business was raised in opposition to any potential EA action, since the decision on whether or not to use robust enforcement against an offender now involves, by law, a detailed consideration by the EA of the impact on business and on economic growth.

[61] https://www.gov.uk/government/news/focus-on-enforcement DEFRA 2012
[62] Section 110 of the 2015 Act
[63] BEIS (2017) Growth Duty; Statutory Guidance. Statutory Guidance under section 110(6) of the Deregulation Act 2015
[64] In addition, the Enterprise Act 2016 introduced a requirement on regulators including the EA which are subject to a duty to have regard to the Regulators' Code and/or the growth duty to publish an annual performance report. The report must set out the effect that a regulator's performance of these duties has had on the way it has exercised the functions to which the duties apply, although these additional obligations are not yet in force, and the Government has stated it will engage with regulators before it is introduced. Nevertheless, the EA is faced in future which being required to state how it has met the obligations placed on it by growth duty and how it has complied with the Regulators' Code, while, still protecting the environment.
[65] https://www.gov.uk/government/publications/environment-agency-enforcement-and-sanctions-policy/environment-agency-enforcement-and-sanctions-policy#public-interest

CASE STUDY

THE FAILURE TO ADDRESS CSOs

The EA stated recently that *"during heavy rainfall the capacity of [sewage systems] can be exceeded, which means possible inundation of sewage works and the potential to back up and flood people's homes, roads and open spaces, unless it is allowed to spill elsewhere. Combined sewer overflows (CSOs) were developed as overflow valves to reduce the risk of sewage backing up during heavy rainfall"* [66]. Hence the need for designed overflows which are supposed only to flow *"during situations such as unusually heavy rainfall"* (subsequently interpreted by the CJEU in Case C-301/10 Commission v UK as being limited in effect to "exceptional circumstances").

However, it is now widely accepted that CSOs are regularly flowing far more often than merely during exceptional circumstances. Even DEFRA acknowledged in March 2021 that *"their [CSO's] use has increased in recent years as climate change has led to greater rainfall and water infrastructure has not kept pace with population growth".*

There are approximately 21,500 CSOs and pumping stations in England and Wales. The Guardian (1st July 2020) has recently established via environmental information requests that such CSOs flowed on "more than 200,000 occasions last year". Some are monitored (so-called Event Duration Monitoring) and many overflows are still unmonitored.

In 2018, the EA required all companies to classify its storm overflows and rectify the unsatisfactory assets usually within 3 years. None of the companies complied.

In its evidence to the Environment Audit Committee in 2021, Natural England stated that *"there are a number of instances involving individual CSOs or water company infrastructure that have caused significant damage to protected sites"* [67].

But it is worth remembering what the NRA's Kinnersley Report concluded on CSOs back in 1989, that *"discharges from sewage works, storm overflows on sewerage systems and some other points are heavily influenced by rainfall and surface run-off. Numeric limits cannot reasonably be set for discharges that are (for the time being) beyond the discharger's control, but consents can define the nature of the flows to be discharged in these situations. Overflows are only acceptable subject to well-established criteria for how much of the flow will be carried to treatment processes or diverted to holding tanks before the overflow operates…consents should be specific in insisting on screens or other safeguards against the discharge of unacceptable solids. Consents for overflows should usually be related to recognised best practice in the design of sewers and storage capacity.*

Consents need to make clear where the limits indicated or exemptions from them relate specifically to dry weather conditions or periods of rainfall. Where the consent allows variations for the effects of rainfall, these should be worded so that they cannot be taken as authorising overloads and overflows building up from other causes.

Conditions requiring review of the consent if the relevant flows are markedly increased by building development or other factors, or actual performance deviates from the design assumptions should also be included".

Moving forward to March 2021, if the NRA's recommendations had (with Government support) been carried through by the EA for the last 25 years, the CSO issue might be largely solved by now.

Instead, in place of Philip Dunne MP's recent Private Members Bill, the Sewage (Inland Waters) Bill, all we have is a commitment from DEFRA that the Government will legislate to place a duty on itself to publish a plan by September 2022 to reduce sewage discharges from storm overflows, and to report to Parliament on progress on implementing the plan, and place a duty on water companies to publish data on storm overflow operation on an annual basis.

Then came the Drainage and Wastewater Management Plans written by consultants commissioned by the industry with Ofwat and EA/DEFRA as spectators and so they will have total control of their regulation by 2022.

However, if the EA will not or cannot use its powers to monitor, inspect and prosecute the very many existing breaches of CSO permits, then no number of plans and reports will change the trajectory.

[66] https://environmentagency.blog.gov.uk/2020/07/02/combined-sewer-overflows-explained/
[67] Natural England WQR0040 Written evidence submitted by Natural England to EAC Committee on Water Quality in Rivers 2021

Declining funding and staffing

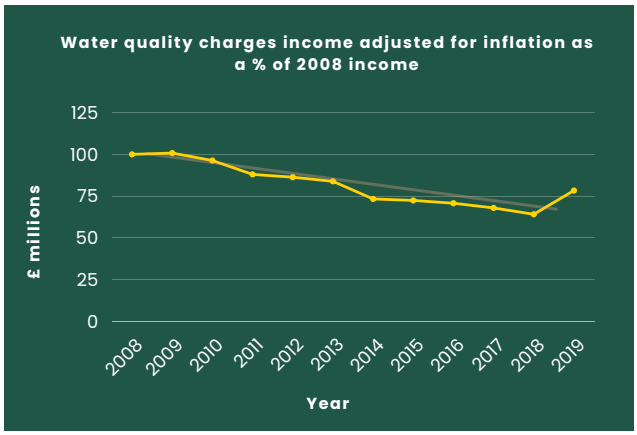
As the EA's role has grown, particularly in relation to flood defence and coastal erosion, funding for those parts of its operations that include protection and enhancement of the freshwater environment has reduced dramatically, as have staff numbers employed by the EA. While efficiency savings may have been made as part of this process, the overall effect has been to reduce markedly the way in which the EA exercises its functions. The data shows to what effect.

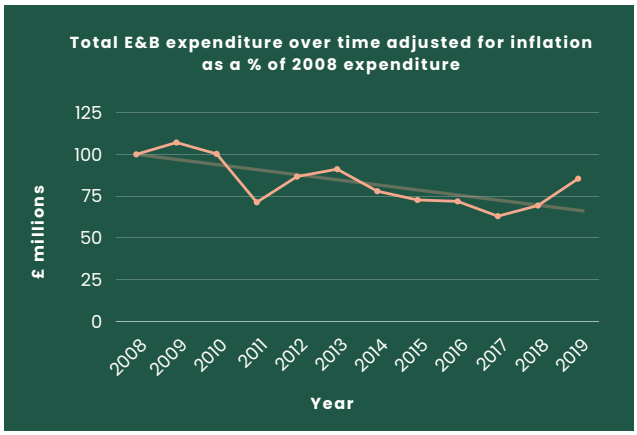
Sir James Bevan has recently stated [68] that: *"good regulation also needs to be funded properly. The core environmental principle is that the polluter pays. Those who carry out activities which could harm the environment should indeed pay, both the cost of the regulation necessary to prevent potential pollution from their activities, and the costs of cleaning things up where they do cause environmental harm. And where it isn't possible or fair for individual polluters to pay some of the critical costs of regulation, like monitoring the environment or enforcing the rules, the government should. Neither of those sources fully fund what we think we actually need to do to protect and enhance the environment. Ultimately we will get the environment we are prepared to pay for."*

Indeed, the Government, through the UK's membership of the European Union and now pursuant to the Environment Bill (shortly to be enacted), has been 'signed up to' the polluter pays principle in England, that polluters are to bear the financial cost of their actions.

However, this has simply not been reflected in the charges that the EA applies to those it regulates (which are subject to the Secretary of State's approval). The graph below (left), compiled from consecutive EA Annual Reports, shows real term drop in charges incomes from water quality charging [69].

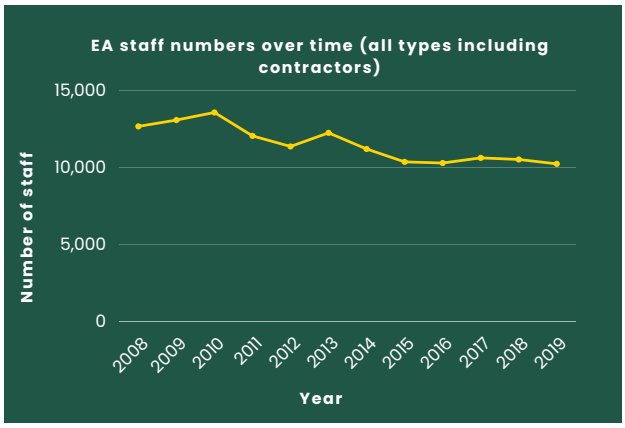
Added to this, the EA's overall Environment and Business budget [70] has also fallen over time as the graph below (right) compiled from EA Annual Reports since 2008 shows.





[68] Sir James Bevan 13th January 2021
[69] Complied using Bank of England inflation adjuster
[70] E&B = Environment and Business, which constitutes all EA activities other than Flooding and Coastal Erosion Risk Management. Note that EA Annual Reports do not provide greater detail so expenditure on water quality is only an unknown fraction of the total E&B expenditure.

EA published data is not sufficiently granular to substantiate the very many anecdotal reports of a lack of staff on the ground (environment officers, fisheries officers etc), but overall, EA staffing levels have also dropped over time.



While there is some scope for maintaining functions with a declining budget where efficiency savings can be made, in the case of the EA's functions of protecting and enhancing the freshwater environment, the effects of such swingeing real-term funding cuts and the reduction in staff numbers, which has been particularly steep in some front-line teams such as Land and Water, which actually attend pollution incidents, can be seen in the state of the water environment.

Conclusions & recommendations

CONCLUSIONS

1) In the 25 years since the EA was established it has had ample time to use its statutory functions to protect and enhance dramatically the freshwater environment, as per its statutory purpose given to it in 1995.

2) However, over the last decade or more, progress in improving the overall quality and ecological status of the freshwater environment in England has plateaued with no obvious sign of an improvement in the EA's performance to address that plateauing. In fact, quite the opposite has occurred, with further decline in the EA's overall performance.

3) Despite a legal requirement on the EA, that it establishes and maintains monitoring programmes to give a coherent and comprehensive overview of water status across England, the monitoring efforts being made by the EA have withered on the vine to the extent that recognised experts conclude that we have "a very limited picture overall of what the actual situation" is in the freshwater environment.

4) Monitoring by the EA has reduced dramatically over the years and looks set to reduce further both in terms of monitoring the wider environment and also EA monitoring of polluting discharges to and abstraction from rivers.

5) The introduction of operator self-monitoring ten years ago, which has been rolled out progressively across all sectors, has dramatically reduced the deterrent to would-be polluters and, as the evidence shows, has opened the door to cheating, such as that undertaken by Southern Water over many years.

6) The rate of inspection carried out by EA staff at regulated sites that have the potential to cause pollution of the freshwater environment has reached an extremely low level with some water company sewage treatment works not being inspected over an entire decade. Many will only receive a single visit from the EA over five or more years.

7) The EA inspection rate of English farms, now subject to regulations on avoiding agricultural diffuse pollution, means that farms can only expect to be inspected once every 263 years.

8) The EA's enforcement and prosecution record shows that the number of prosecutions conducted by the EA has dwindled dramatically over time with the rate of decline increasing rapidly since 2012/2013 and the introduction of civil penalties. The useful stigma of criminal conviction has largely been removed as a deterrent to would-be polluters and those who would harm the freshwater environment.

9) However, the EA is not to blame for all these failings. Since it was established in 1995 the EA has been made progressively subject to constraints on its ability to deliver its principal statutory function of protecting and enhancing the environment, including the freshwater environment. Successive governments have made the EA subject to guidance on sustainable development, on better regulation and business efficiency, culminating in the Regulators' Code of 2014 and the statutory growth duty applied in 2017, which have all combined to make it increasingly impossible for the EA to be a robust and effective regulator, such that it achieves its primary objective of protecting and enhancing the environment, including the freshwater environment.

10) Over the last decade or more the EA's charging of those it regulates has, in real terms, withered in complete contradiction to the Government's and the EA's stated policy of observing the polluter pays principle.

11) The EA's overall environment and business budget has shrunk dramatically over the last decade and was, in 2017, roughly only 60% of its 2008 level.

12) EA staff numbers continue on their downward trajectory, although the granularity of EA reporting makes it impossible to say what the decline in environment officer and fishery officer numbers has been.

13) Overall, as the case studies in this report illustrate, the reduction in funding, reduction in staff numbers and sequential subjugation of the EA by central government to the business and economic agenda, culminating in the statutory growth duty, have left the EA as a pale shadow of the National Rivers Authority that it succeeded in 1995.

14) Without systemic change and a recognition that the EA needs dramatic reform both in terms of its internal make-up, but also in terms of the statutory rules, regulations and guidance under which it operates, and the funding and staffing it enjoys, it is unlikely that anything more than the further managed decline in the quality of the freshwater environment can be achieved in future years.

Therefore this report makes the following recommendations:

FOR GOVERNMENT

1) The Government needs urgently to alter and amend the legal rules, codes and guidance under which the EA operates, in order to allow the EA the freedom to pursue its existing statutory objective to protect and enhance the environment, in this case the freshwater environment, in a way that is unencumbered by deregulatory, overly business-friendly, or pure economic growth agendas.

2) The Government must amend the duties under the 1995 Act to remove the requirement that the EA needs to consider the costs to the persons or businesses it regulates when exercising its statutory functions. If the EA were to act in an objectively unreasonable manner towards regulated persons or businesses, then the current system of judicial review is sufficient for any regulated person to challenge such decisions.

3) The Government should disapply the Regulators' Code as it currently applies to the EA, recognising that the Code constrains the ability of the EA to provide a robust and convincing deterrent to would-be polluters and those who harm the wider environment.

4) The Government should disapply section 108 of the Deregulation Act 2015 with respect to the EA, as its purpose is to protect and enhance the environment and not to seek economic growth across businesses, which is the remit and purpose of many other statutory agents and, indeed, departments of Government.

5) The Government must sufficiently fund the EA, and ensure it is appropriately staffed, to undertake the work required to restore the freshwater environment to good ecological status, both by allowing it to raise sufficient charges by way of relevant charging schemes applied to those the EA regulates, as well as by way of direct Government funding for those essential EA activities, such as comprehensive monitoring the wider environment, that are required.

FOR THE EA

6) The EA must reinstate comprehensive monitoring of the water environment, to include marginal water bodies and headwaters of river catchments, to ensure a coherent and comprehensive picture of the state of the freshwater environment in England is available.

7) The EA must return to the principles outlined in the Kinnersley report, and deliver - and be allowed to deliver - its regulatory functions in a robust manner, where the threat of detection and ultimate prosecution provides a real deterrent to avoid damage being caused to the freshwater environment. Businesses, farms and others who would harm the freshwater environment must not be able to regard it as a sensible economic decision to pollute and/or cause harm.

8) The EA must reinstate a programme of unannounced and frequent inspections of all discharges to the freshwater environment, and of farms with respect to diffuse pollution, in such a manner as to return to the principles identified in the Kinnersley report in 1989, to ensure that a regime of unannounced and frequent inspections creates the sufficient deterrent to would-be polluters to reverse the decline in the freshwater environment. Similar rigour should be applied to abstractions from rivers, lakes and groundwater.

9) The EA should instigate a rapid rolling review of all its existing permits, consents and licences to ensure that they are sufficiently stringent to protect the ecology of receiving water bodies, or bodies from which water is abstracted, based on the best available local evidence and taking into account cumulative impacts and effects in catchments. Permits and licences need to be closely defined in sufficient technical detail for the receiving waters to be protected from damage at all times and should not present any loopholes or other mechanisms for discharges, abstractors or others who might damage the freshwater environment to exploit.

10) Operator self-monitoring should be abolished, with the EA either returning to a system of taking samples itself by way of its own staff visiting points of discharge, or by way of the installation of continuous monitoring equipment operated not by dischargers or abstractors, but by the EA itself or contractors to the EA, with the costs of such monitoring equipment paid for by the abstractor or discharger in accordance with the polluter pays principle.

11) The EA should ensure that monitoring of dischargers and abstractors should include 24 hour monitoring of major discharges of sewage effluent and all other significant permitted discharges and abstractions, to pick up diurnal fluctuations in water quality or quantity and to provide a more comprehensive picture of the effect on the ecological quality of water bodies which received discharges or from which water is abstracted.

12) The EA should revise its Enforcement and Sanctions Policy and other relevant policies to demonstrate clearly that, going forward, it will require 100% compliance from all bodies it regulates, with the default position being that the EA will prosecute offenders for anything other than the most minor offences, for which civil penalties will then be used. Industrial, water industry and farming sectors have had, in some cases, many decades of guidance to be able to understand what is required of them, such that soft touch regulation and enforcement is no longer justifiable.

13) The EA must seek increases in charges it applies to those it regulates, to ensure that the polluter pays principle is applied, with the system of charging truly reflecting the environmental costs of pollution or other uses of the water environment, as well as the requirement for monitoring and enforcement activities.