2021 River Basin Management Plan

The Economics of Managing Water

Published: October 2019

Contents

1. Summary	. 1
2. Who Benefits	. 3
3. Who pays, and when?	. 4
4. Funding the future	. 5
5. Choices	. 6
6. Contacts	. 6
7. References	. 7

1. Summary

Clean and plentiful water is priceless, but we need to have some measure of its economic worth so we can direct enough resources into its care and management. A prosperous economy and a healthy society depend on a healthy environment. The current 2015 river basin management plans include an assessment of the economics (i.e. the costs and the benefits) of managing water in England (River Basin Management Plans: Impact Assessment).

Businesses, the third sector and the public sector jointly spend about £5 billion a year to protect the water environment (to prevent deterioration) and protect public health and wellbeing. This includes the costs of collecting and treating our sewage and meeting the standards set in regulations. We know that this investment protects our natural capital water assets, which are worth an estimated £39.5 billion (Office for National Statistics UK natural capital: ecosystem accounts for freshwater, farmland and woodland).

From 2016 to 2021 we expect around £3 billion will be invested in enhancing the water environment, delivering just under £6 billion in added benefits (in present value terms, over an appraisal period to 2052). The investment is coming from a range of sources, but the biggest investors are water company customers, via the Water Industry National Environment Programme, and payments to farmers by government under environmental land management and stewardship schemes.

In the 2015 river basin management plan Impact Assessment, we estimated that over the course of 37 years from 2015 to 2052, it will take an investment of £17.5 billion to achieve 75% of water bodies and 95% of elements at good status or better. The return on that investment is at least £22.5 billion in benefits to our citizens and

our country. That means investing in water will leave our country a minimum of £5 billion better off. That's good for us and good for nature.

You can see the full breakdown of the economics of the 2015 river basin management plans in the <u>Impact Assessment</u>. The Environment Agency is currently working to update these figures and will present a revised analysis in 2020 when it consults on the drafts of the 2021 river basin management plans.

The current rate of progress is just a fraction of what is needed to reach the government's 25 Year Environment Plan target of at least 75% of waters to be close to their natural state. If we continue investing at the current rate, we believe it will take over 200 years to address the impacts from some sectors. In addition, the more the impacts of climate change are felt, the harder the job of meeting the 25 Year Environment Plan target becomes and the greater the costs will be. At the same time we will become even more reliant on the climate regulation and mitigation services that nature provides. Arguably our biggest challenge is how to fund all of the things we need to do to restore our water environment, whilst protecting it against current and future pressures.

Decisions individuals, companies or whole sectors make about how much money they will spend to protect or improve the environment are complex. While some decisions are driven by markets (what someone is willing to pay for a product or an activity) many decisions are in response to the legal requirements and policies set by government. Government also directly funds environmental improvements, such as incentive payment to farmers or funding the Coal Authority to reduce the pollution from abandoned mines.

Government also decides how much funding the Environment Agency and other organisations gets to help protect and improve the water environment, and what powers they can use to do this.

2. Who Benefits

In short, we all benefit from having clean and plentiful water. The natural capital in our environment – the air, water, soil and ecosystems that support all forms of life – provides us with a huge range of benefits that support us to live healthy, happy lives. Whether that's cleaning your air, purifying your water or giving you beautiful landscapes to enjoy, nature does something for everyone. Research suggests that spending as little as two hours a week in green spaces or near water can leave you healthier and happier. More and more doctors are starting to prescribe a dose of nature to help people feel better.

Most businesses rely on the environment in one way or another, from supporting the health and wellbeing of their employees, to physical assets that need to be safe from floods or wildfires, to supply chains dependent on effective transport links and natural resources. Our natural assets are usually worth much more to society when they are intact and functioning. Short term financial gains, such as removing a woodland to build infrastructure, may result in long term costs that are overlooked in traditional decision-making processes. These costs come in the form of increased exposure to environment and climate risk for businesses and residents, as well as the loss of wildlife and habitats. If our shared natural capital is damaged or degraded, we all bear the costs when we lose some of the ecosystem service benefits from nature.

However, people don't benefit equally from these ecosystem services. There are some types of benefits that are captured privately by groups of people. The fishing rights belonging to an angling club or the water rights belonging to a business that abstracts water are examples of this. Once the fish have been caught or the water abstracted, they are not available for other people to benefit from them. It is easy to get investment in this type of benefit – angling club fees or abstraction licence fees – because if people don't pay then they can be prevented from accessing and taking the benefit. A proportion of fees and charges is usually re-invested in making sure the flow of benefits is sustainable and can be maintained over the long term. The beneficiaries pay for at least some of the benefits they get.

Some benefits are widely available to us all. So much so that we take them for granted, like clean air or enjoying beautiful views. It is difficult to get investment into protecting these types of benefits because there is usually no way to stop people from accessing them, even if they don't pay. Of course, many of the benefits of the natural world should be free and available to everyone as part of our shared home on Earth. That leaves us with the problem of working out who does pay to protect this natural capital or invest in making it able to provide more benefits for longer.

3. Who pays, and when?

It is a common principle in caring for the environment that if someone pollutes or causes damage then they should pay to put that right and often compensate those affected by the loss of benefits. Often though, this principle is hard to apply. Sometimes 'market failures' stop the true cost of pollution-free production being passed on to consumers. We get cheaper products, but at the hidden cost of a degraded environment. Not all consumers are able to, or prepared to, pay more for products that are produced while abiding by sustainable, environmentally sensitive practices. In other cases it may be that the source of the damage can't be traced, or perhaps the degradation is happening because of large scale issues like climate change. In these cases we might look for investment from those who benefit from the goods and services the environment provides, rather than those who pollute. One example of 'beneficiary pays' is our collective investment to protect the environment that our water supply depends on, through our water bills. We benefit from nature and we reinvest through our water companies. If neither 'polluter pays' nor 'beneficiary pays' methods can be relied upon to secure investment, government will often use taxpayer money to pay to maintain and improve natural capital.

Despite this, our society does not currently invest enough into natural capital and the climate resilience of our landscapes. This means that the places we need to protect and improve, to meet our current and future needs of safe and secure supplies of water, food and clean air, are at risk. That risk affects everyone, from individual householders to big businesses and ultimately affects the productivity of the country as a whole. We need to decide what to do differently, to reduce this risk and create a bright, healthy, prosperous future for us all.

4. Funding the future

The government's <u>Clean Growth Strategy</u>, <u>Industrial Strategy</u> and <u>25 Year Environment Plan</u> set out commitments to preserve and enhance our natural capital. This is an essential basis for economic growth and long-term prosperity. We can only achieve this aim if we work together, using a range of different mechanisms to reach our shared goals. The mechanisms of 'public funding for public goods' and regulation alone will not provide sufficient investment to ensure climate resilience and nature restoration.

Our success will depend on bringing together all those who use water and who benefit from the services that resilient and healthy river catchments provide to increase the investment in restoring nature, working with natural processes and strengthening catchment stewardship. The Environment Agency can help increase private investment and encourage sustainable business models. We can help to develop demand led approaches that create new markets for environmental improvements and provide efficient allocation mechanisms. We can also support capacity building; building the capacity of people and organisations to invest in and manage nature sustainably, increasing our capacity to access nature with more opportunities for recreation, and the capacity of our natural capital to supply the benefits the whole of society relies upon. These are just some of the ways we can increase the effort going into achieving our shared goals for water. Together we must do more to reduce problems at source, innovate to find more cost-effective ways to overcome the challenges we face and increase our level of ambition.

We need to know what you think about how we fund the protection and improvement of our water environment, now and into the future.

5. Choices

Question 1: How should the step change in protecting and improving the water environment be funded and who should pay? Are there any barriers to doing this and how can they be overcome?

6. Contacts

If you have any feedback or comments on the evidence contained in the summary then please contact:

enquiries@environment-agency.gov.uk

7. References

River basin management plans: impact assessment:

https://www.gov.uk/government/publications/river-basin-management-plans-impact-assessment

Office for National Statistics UK natural capital: ecosystem accounts for freshwater, farmland and woodland. Table 5: UK freshwater asset values by service, 2014 to 2015:

https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/uknaturalcapital/landandhabitatecosystemaccounts#ecosystem-accounts-for-freshwater

The Clean Growth Strategy: Leading the way to a low carbon future https://www.gov.uk/government/publications/clean-growth-strategy.

Industrial Strategy: Building a Britain fit for the future: https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future.

A Green Future: Our 25 year plan to improve the environment: https://www.gov.uk/government/publications/25-year-environment-plan