RUNNING Exploring people's willingness to pay for river protection

Natan Doron

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The polling informing this research was caried out by YouGov Plc. Total sample size was 2,830 adults. Fieldwork was undertaken between 15th-17th May 2012. The survey was carried out online. The figures have been weighted and are representative of all GB adults (aged 18+).

Summary

This report examines the extent to which information about environmental scarcity as well as the role of government and water companies determines the willingness of people to pay extra on their annual water bills to reduce river damage resulting from excessive water abstraction.

The main conclusion of the research is that environmental information about scarcity leads to higher willingness to pay but who delivers the information matters.

The research led to four main findings:

- The role of government is a strong factor in determining willingness
- Responses to environmental information vary according to age, social classification and region
- Providing increased information about the details of the specific scheme being funded can lead to higher level of willingness to pay
- The perceived fairness of the distribution of payment for river protection schemes can also increase levels of willingness to pay

INTRODUCTION

't is now clearly established that the rate at which water is being taken out of the environment to supply homes and businesses is causing damage to rivers across the UK.1 The water white paper 'Water for Life' published in December 2011 has signalled a government intention to change the system of taking water out of the environment that is "inadequate" and if not reformed will damage rivers "beyond repair".

The white paper also clearly states that this means changing the price system in a way that better reflects the "value of water to customers, its relative scarcity and the value of ecosystem services to ensure our rivers ... are protected".

But what is the value of river protection for customers? Can you put a price on the health of your local river environment? Would people be willing to pay £5 or £10 per year to protect it? Would everyone be willing to pay the same?

This research shows that the price people place on reducing river damage fluctuates greatly depending on what information is given to them and by whom. Furthermore, some groups of people are far more responsive to environmental information than others.

Understanding this process is important because water companies are about to embark on a series of customer consultations as part of the price review process. The price review process is overseen by the government through the activities of the office for water regulation, OFWAT. Within this framework, water companies are given a large degree of autonomy and freedom to consult with customers in determining water bill prices and the proportion of revenue spent on different schemes.

Whilst OFWAT retains the final say on approving the price review plans, it is a risk that customer consultation programmes undervalue the price of reducing such river damage. The risk of undervaluation is that failure to provide necessary investment for reducing river damage now will lead to greater water shortages and more severe environmental damage in future. Such damage will be more complex and costly as time goes on.

Previous research by the Fabian Society demonstrated that views on water efficiency were liable to change once people understood more about the social and environmental context of their water use. Put simply, if you don't know that there is a limit on the amount of water that can be taken out of the environment to supply your home then there is little motivation for you to conserve water.

We hypothesised that the same is likely to be true when asking people how willing they are to pay for reducing river damage as an annual extra on their water bill. To correctly value the health of your river, you have to understand the connection between the demand for water and the subsequent damage caused to rivers by the large volumes taken out of the environment to supply homes and businesses.

If our hypothesis is correct, then it is important that water companies understand the connection between providing environmental information and determining levels of customer willingness to pay for reducing river damage. Such an understanding could lead to more effective and realistic valuations of river environments.

We tested this hypothesis by conducting a survey of around 2400 people. We divided these people into six smaller groups of around 400. Each group was given different information before asking them how much extra they would be willing to pay on their annual water bill to reduce river damage in their local area. The different information each group was given is illustrated in the table below.

Table 1: The six survey groups had a slightly different set of information provided for their first question. Each group has been given a short-hand name that will be used for referencing later in the report.

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Government	t no inte	\mathbf{a}
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Thinking about if the government took measures and your local water company changed its operational practices to protect the quality of river environments such as reducing damage to rivers and wildlife in your area caused by providing your water and sewage services, approximately how much extra, if anything, would you be willing to pay on your annual water bill for this service?

Government with limits

There is a limit on the amount of water that we can take out of the environment to supply our homes and businesses. In parts of the country, current levels of water use may be causing damage to natural river environments and the surrounding ecosystem and may also impact the water supply.

Thinking about if the government took measures to protect the quality of river environments such as reducing damage to rivers and wildlife in your area caused by providing water and sewage services, approximately how much extra, if anything, would you be willing to pay on your annual water bill for this service?

Water company no info

Thinking about if your local water company changed its operational practices to protect the quality of river environments such as reducing damage to rivers and wildlife in your area caused by providing water and sewage services, approximately how much extra, if anything, would you be willing to pay on your annual water bill for this service?

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Government and water company no info

Thinking about if the government took measures and your local water company changed its operational practices to protect the quality of river environments such as reducing damage to rivers and wildlife in your area caused by providing your water and sewage services, approximately how much extra, if anything, would you be willing to pay on your annual water bill for this service?

Government and water company with limits

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Thinking about if the government took measures and your local water company changed its operational practices to protect the quality of river environments such as reducing damage to rivers and wildlife in your area caused by providing your water and sewage services, approximately how much extra, if anything, would you be willing to pay on your annual water bill for this service?

What we found from this research was that the role of the government was a strong factor in determining how willing people were to pay for reducing river damage. Information about the connection between taking water out of the environment for supply and the damage caused to rivers increased willingness to pay overall, but people placed far more trust in the government than water companies to provide this information.

Responses to the information across the different groups in our survey varied according to age, social classification and region. Older people were more sceptical towards the environmental information provided in our survey. Younger people, Londoners and those in social classifications ABC1² were more receptive to environmental information. This complex variation has important implications for how water companies consult their customers.

The research also found that people are more willing to contribute extra on their water bills to reduce river damage if they know more about the precise plans to do so. Giving people specific information about how water damage will be reduced by extra funding mattered across all the groups in our survey. Finally, our research found that fairness also matters. If people thought that the distribution of payment was fair, they were more willing to pay towards reducing river damage.

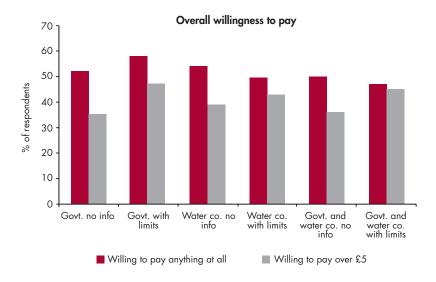
These findings question the appropriateness of the low priority the government is placing on its communications role in the price review process. They also provide a steer for water companies on how to approach their customer consultations to reflect the variety in opinion across different groups in the population.

FINDINGS

The results from the survey show that environmental information (referred to broadly as 'limits' from now on) does have an effect on how willing people are to pay extra on their annual water bill to reduce river damage. The figure below shows two sets of results for each survey group. These results are those who are willing to pay at anything extra at all (at least £0.01) a year and then what percentage of those willing to pay anything were willing to pay over £5 extra a year.

The group that received the information about limits and were only told that the government were acting on this issue had the highest levels of people willing to pay anything at all. This group also had the highest proportion of people willing to pay over £5.

Figure 1: The bar on the left shows what percentage of the group were willing to pay at least something extra a year. The bar on the right shows what proportion of those willing to pay something were willing to pay over £5 a year



In every group survey, there were at least 40 per cent of people who were unwilling to pay anything at all on top of their current water bill to pay for reducing river damage. This is perhaps unsurprising as the UK faces economic uncertainty. It is perhaps also a question of the legitimacy of asking people to pay the price of a system that has neglected to accurately protect the environment in the past.

Figure 1 also illustrates that the responses of the survey groups tells a complex story about how people reacted to the different information provided. This story is told below, broken down into four main headings.

2.1 The role of government was a strong factor in determining willingness to pay

Information about the limit on the amount of water that can be taken out of the environment to supply homes and businesses produced both the highest percentages of those willing to pay substantial amounts (over £5 a year) as well as those willing to pay anything at all. This was, however, only true when the scheme was seen to be motivated by government acting alone.

When water companies were involved in providing people with the information about limits the number of people willing to pay anything at all in the first place dropped. There was an 11 per cent difference between those willing to pay anything at all in the government with limits group and the government and water company with limits group.

This shows that government was more trusted to deliver information about the environmental impact of our water supply than water companies.

those willing to pay extra on their annual water bill to reduce river damage in the government with limits group

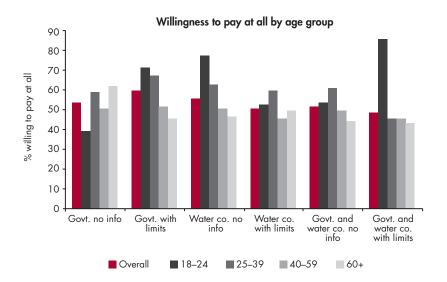
those willing to pay extra on their annual water bills to reduce river damage in the government and water company with limits group

2.2 Responses to environmental information vary according to age, social classification and region

Whilst the government with limits group showed the highest willingness to pay, beneath the top-line figures were interesting differences amongst people's reactions according to age, social classification and region.

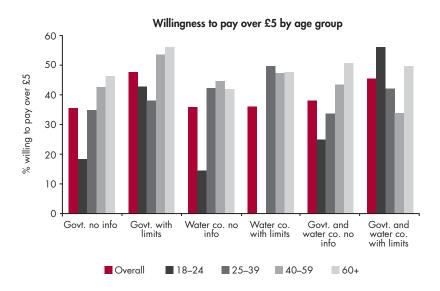
As shown in figure 2 below, those in the two groups aged 40–59 and 60+ did not respond as positively to the limits information in the survey. The 60+ group actually saw a higher willingness to pay anything at all when the government was acting alone but without the limits information.

Figure 2: Percentage of people willing to pay anything extra at all on their annual water bill to reduce river damage across all age groups



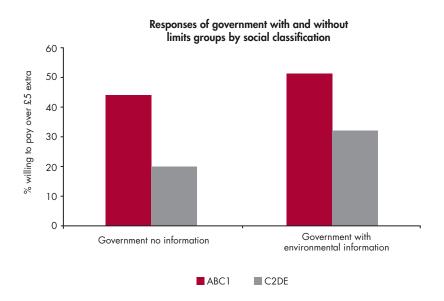
Whilst the younger age groups were more willing to pay anything at all, it was on average the older age groups that were more willing to pay over £5. This is shown in figure 3 below.

Figure 3: Percentage of people willing to pay over £5 extra on their annual water bill to reduce river damage across all age groups



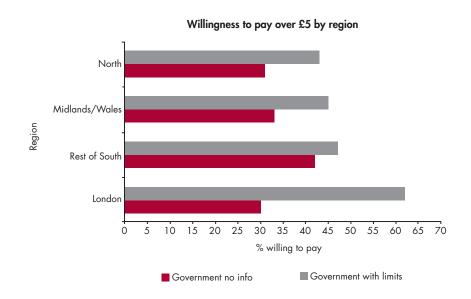
Similarly, there was a difference in respect to how people in different socio-economic classifications responded to the survey questions. Those in social classification ABC1³ were more responsive to the limits information. This is demonstrated in figure 4 below by contrasting the responses of people in the 'government with limits' group with those in the 'government no info' group.

Figure 4: Percentages of those willing to pay over £5 extra on their annual water bills to reduce river damage. Responses broken down by social classification in the government with limits and government no info groups



Differences were also seen in regional terms with people in London showing the highest levels of willingness to pay. London shows a 32 per cent increase in willingness to pay over £5 according to whether government provides information around limits. This contrasts with a less steep but not insignificant 12 per cent rise in the Midlands/Wales (33 per cent, 45 per cent) and the north (31 per cent, 43 per cent), 5 per cent rise in the rest of the south (42 per cent, 47 per cent). This is shown in figure 5 below.

Figure 5: Percentages of people willing to pay over £5 extra on their annual water bill to reduce river damage. Responses broken down by region in the government with limits and government no info groups



People in London were also more responsive to government and water companies working together. The percentage of those in London willing to pay over £5 in the government and water companies with limits group was 64 per cent, compared to an the regional average of approximately 49 per cent.

This finding is supported by previous Fabian Society⁴ research into water sustainability in the south of England, which found high levels of support for working partnerships between government and industry, the feeling being that each actor provided a 'lock' on the other's interests.

The data points towards a link between those in London and in social classifications ABC1⁵ being more responsive to environmental information in determining higher levels of willingness to pay. Given that wages are on average higher in London and among people in social classifications ABC1,6 there is a perceived relationship between ability to pay and willingness to pay.

The current squeeze on living standards and rise of in-work poverty in the UK as a result of the financial crisis means that we are likely to see an impact on ability to pay. If willingness to pay consultations take an average of customers' views, there will be a significant downward drag as a result of those who are unwilling to pay because of their having a lower ability to do so.

Those on lower incomes cannot afford to place as high a monetary value on reducing river damage as those on higher incomes. This illustrates the extent to which poverty reduction is, in fact, a central concern of environmental policy. In this sense, water companies that provide generous social tariffs to help customers with affordability problems should see this as part of the sustainability strategy.

2.3 Importance of information about the details of the specific scheme being funded

The survey also asked people if they would be more willing to pay extra on their annual water bills to reduce river damage if they knew details about the specific scheme that the extra funding would go towards. 43 per cent said that they would.

When offered a list of schemes to reduce levels of water taken out of the environment to supply homes and businesses, there was a clear majority for repairing old and inefficient infrastructure. This is seen in figure 6 below.

The schemes listed for people in the survey purposefully did not include the building of new reservoirs. This was because building new reservoirs is an expensive and often ineffective way to respond to episodes of water shortage. Research has shown that reducing levels of water demand as well as repairing existing infrastructure are more appropriate methods for addressing many water supply problems.⁷

The popularity of repairing old infrastructure is a clear reflection of the view that water companies are responsible for vast amounts of wastage through leakage in the supply system. This view persists amongst large groups of the public despite significant investment by water companies in repairing infrastructure.8

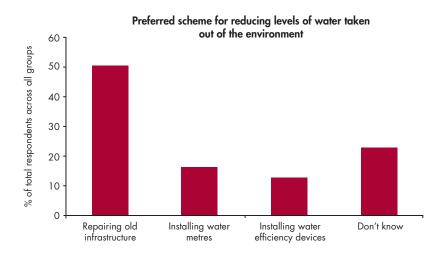
Given that 43 per cent of people in our survey stated that knowing more about schemes to reduce river damage would increase the likelihood of them being willing to pay extra on their annual water bill, water companies should consider communicating their efforts to repair infrastructure in a more high profile manner. In addition, this should be a key part of the information provided as part of the customer consultation process in the current price review.

50% 49%

of people selected spending extra money on repairing older, inefficient infrastructure as their preferred method for reducing levels of water taken out of the environment

of people thought that paying according to what you use was the fairest arrangement to pay for river protection schemes

Figure 6: Views across all survey groups of the preferred scheme for reducing levels of water taken out of the environment



2.4 The perceived fairness of the distribution of payment

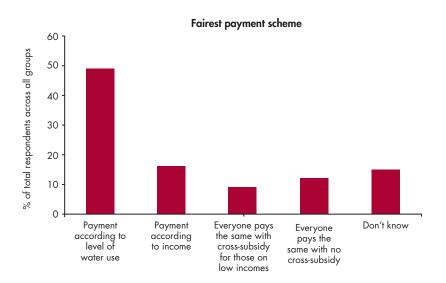
Our survey results also show that fairness matters to people in determining how willing they are to pay extra on their annual water bill to reduce river damage. When asked whether people would be more willing to pay extra on their annual water bill if they thought the payment scheme was fair and transparent, 44 per cent said they would.

Our survey then asked people which payment arrangement they thought was the fairest. We intentionally omitted the current default payment for water bills, the rateable value system. This system has been shown to be outmoded and unfair by the landmark government review undertaken by Anna Walker.9

As seen in figure 7 below, the payment scheme that people felt was fairest was overwhelmingly payment according to level of water use. This confirms what previous Fabian Society research into water has shown about the principle of payment according to use more broadly. When given a range of options, people intuitively feel that payment for use of an important resource was the fairest way.¹⁰

Our survey did not ask if payment according to level of use should include a cross-subsidy for people with affordability issues. This is clearly an important consideration and the need to address affordability issues has already been shown to be crucial by illustrating the link between ability and willingness to pay for reducing river damage.

Figure 7: Views across all survey groups of the fairest scheme for distributing payment for reducing river damage



If payment according to level of water use is the fairest way to distribute the burden of any additional cost to customers for reducing water damage, then water companies have to think more seriously about universal water metering. This will be important for securing public support for attempts to increase the sustainability of our water supply in future.

The popularity of payment according to use in our survey is understandable given the focus of the questions on the need to reduce levels of water taken out of the environment. It simply sends out the wrong message to people if a scarce resource can be paid for in a way that does not reflect level of use.

CONCLUSIONS

This research has shown that whilst the provision of environmental information is important in determining how willing people are to pay on top of their annual water bill for reducing river damage; it can also have a detrimental effect if delivered in the wrong way.

The water regulator, OFWAT should be further aware that whilst it may be too late to alter the hands off nature of the price review process, it could result in a lower valuation than if customers really believed government was taking the lead in overseeing increased investment to reduce environmental harm.

This, however, should not mean that water companies abandon talking about the environment. It is key that all companies retain sustainability goals as part of their customer engagement strategies as part of the long-term trend towards normalising this agenda in society. In the short-term however, the dynamic around public attitudes to water companies and the environment needs to be considered. It is the view of this report that the government has a responsibility to make clearer the environmental constraints under which water companies are operating.

Here we suggest two ways in which this could happen. Firstly, the government could make a public communications intervention to signal that increasing environmental constraints in coming years will mean an increase in water bills. This has happened in the household energy sector and the government should act responsibly be doing the same with water.

Secondly, water companies could explore ways to invoke the legitimacy provided by the role of government in their customer engagement strategies. This could be done by clearly stating that customer consultations and sustainability goals are mandated by the government.

Another important consideration and one not explored in this research is the role of third sector organisations in communicating environmental information about water. These could be environmental groups such as Waterwise and WWF or more local groups embedded in communities. These organisations could be instrumental in engaging people as part of the customer consultations in the price review process.

The variety and differences of responses amongst different age groups, regions, social classifications highlights the importance of extensive data gathering. Older people, for example, clearly require more convincing in terms of the necessity to protect the environment and its relation to household water use. Young people on the other hand are more responsive to environmental information but are less confident in assessing the merits of different schemes and systems of payment. This should be taken into account by water companies in designing customer engagement strategies.

THREE TIPS FOR WATER COMPANIES

- 1 "Government made us do it": Signal that the government has made it a priority that water companies reduce river damage from water abstraction
- 2 "No one size fits all": Tailor communications with customers according to factors such as age, social classification
- 3 "We're tackling leakage": Letting the public know more about how seriously you are tackling leakage can increase public support for sustainability measures

What is also important to address is the fact that across all the different survey groups, at least 40 per cent of people are unwilling to pay anything on top of their current annual water bill to reduce river damage. This unwillingness to pay anything at all is particularly pronounced amongst those in social classifications C2DE¹¹ as well as in regions outside of London. This implies a link between willingness and ability to pay extra for reducing river damage.

This has ramifications for a broader environmental debate about why reducing inequality should be a key concern of sustainability advocates. Wherever possible they should seek to reduce the pressure of ability to pay on how people value the environment.

Current debates around the public politics of water mean that leakage needs to be aggressively campaigned on. This was suggested in previous Fabian Society research¹² and has only been reinforced by the strength of the survey data discussed in this report. This should be an industry-wide priority. There needs to be a concerted effort to change the terms of the debate around infrastructure and leakage.

This research further underlines the connection between fairness in our water charging system and metering. The overwhelming popularity for the payment according to levels of use principle shows how water metering is essential for sustaining broad public support and co-operation for the sustainability challenges facing the water industry.

This speaks to the ongoing debate about water metering. Currently around only 40 per cent of people in the UK are on a water meter. The government should set out a clear timetable for universal metering in the UK. The recently published Environment Food and Rural Affairs Committee report has added to the repeated calls for universal metering and this research provides further evidence in support.

THREE TIPS FOR GOVERNMENT

- 1 "Our rivers matter": Government should make a public communications intervention to signal that we will have to pay more to protect our rivers and water supply for future generations
- 2 "Fairness matters": Take the bold action needed to set out a clear timetable for universal metering
- 3 "Sharing the burden": Government should take steps to ensure that those with existing affordability problems are not disproportionally impacted by an increase in water bills

The water sector is at something of a crossroads. With rising costs and increasing environmental uncertainty, public attitudes towards the industry are liable to change a great deal in the coming years. Quite how they do is open to influence. A deeper understanding of public attitudes as well as a sensible role played by the government in better communicating environmental concerns could see a water system that meets its challenges with public support.

Whilst our previous research stated that responsibility provides the strongest lens through which to increase support for water efficiency measures, current levels of water metering undermine the conditions necessary for responsibility to be effectively used in framing water efficiency narratives. Until such conditions are altered, making the case for responsible water use will remain an uphill struggle.

But perhaps there is a bigger picture. Could it be that the declining health of our rivers is actually a consequence of a society that measures everything only in terms of monetary value? It is likely that we'll have to move away from this mindset in order to preserve our rivers and natural environment more broadly. This also encompasses the lived experience of those in society who suffer the worst effects of inequality. Until our practical concepts of value come to encompass these things, short-term measures such as increased water bills will, at best, only paper over the cracks. We must instead seek to bring about a far reaching paradigm shift in our measures of prosperity.

Endnotes

- 1 (WWF, 2011; Environment Agency, 2008).
- 2 ABC1 and C2DE refer to the National Readership Survey (NRS) social grades and these are taken to equate to middle class and working class respectively. Only around 2% of the UK population identifies as upper class, and this group is not included in the classification scheme. The NRS social grades are a system of demographic classification used in the United Kingdom.
- 3 Ibid.
- 4 (Doron, 2011).
- 5 ABC1 and C2DE refer to the National Readership Survey (NRS) social grades and these are taken to equate to middle class and working class respectively. Only around 2% of the UK population identifies as upper class, and this group is not included in the classification scheme. The NRS social grades are a system of demographic classification used in the United Kingdom.
- 6 Ibid.
- 7 (WWF, 2011).
- 8 Ofwat reported that in 2010, leakage levels were about 35% lower than they were at their peak in the mid-1990s. In addition, the water industry has committed to invest £22 billion in the next five years to maintain and improve infrastructure.
- 9 (Walker, 2009).
- 10 (Doron, 2011).
- 11 ABC1 and C2DE refer to the National Readership Survey (NRS) social grades and these are taken to equate to middle class and working class respectively. Only around 2% of the UK population identifies as upper class, and this group is not included in the classification scheme. The NRS social grades are a system of demographic classification used in the United Kingdom.
- 12 (Doron, 2011).

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About the Fabian Society Environment and Citizenship programme

This report is part of the Fabian Society's ongoing Environment and Citizenship programme. The programme looks at environmental policy challenges and the role of citizenship: both in terms of democratic consent and personal behavioural change. It considers the interaction between environmental issues, fairness and social justice and how public support can be built for sustainability measures affecting personal consumption. The programme seeks to influence the ideas, policies and arguments of government, political parties and the private sector through a series of publications, lectures and seminars.

RUNNING DRY

EXPLORING PEOPLE'S WILLINGNESS TO PAY FOR RIVER PROTECTION

Natan Doron

To what extent does the type and delivery of information presented to citizens impact on their willingness to pay for protection of natural habitats?

Running Dry examines this question through the issue of public attitudes to river protection. At a time when excessive abstraction is damaging the long-term health of Britain's rivers and their ecosystems, this study asks whether people are willing to pay extra on their annual bills to protect them.

By investigating the impact of social and environmental information, and the role of government and industry in providing it, this report highlights how the use of different information affects different environmental arguments.

In demonstrating how public support can shift through the framing of arguments, this study makes an important intervention in the debate around the challenges facing our society in terms of the health of natural habitats, shared responsibility and the preservation of our resources.