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Water Use in Southern England

What do the public
think is fair?

Natan Doron

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Water Use in Southern England

What do the public think is fair?

Natan Doron



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About the Fabian Society Environment & Citizenship programme

This report is part of the Fabian Society's Environment and Citizenship programme. The programme looks at environmental policy challenges and the role of citizenship: both 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 corporate sector through a series of publications, lectures and seminars.

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This research explores people's sense of fairness with respect to household water use in order to identify ways of building public support for actions to preserve water supply. It is based on 8 deliberative focus groups with over 50 participants in Southern England carried out in June - November 2011. Participants were drawn from the full range of socio-economic backgrounds and political identification.

- The deliberative process adopted in this research shows that an understanding of the social and environmental context of water use can create broad support for sustainable consumption.
- This support for sustainable consumption is strongly motivated by ideas of fairness. This includes both procedural fairness of the structures that determine how water is paid for and also the fairness of using water responsibly.
- This report identifies that once people understand the social and environmental context of water use, there is strong support for universal metering.
- Participants described notions of 'virtuous' and 'stupid' water use, with some participants feeling that the latter should be made prohibitively expensive.
- The report suggests that the issue of investment in infrastructure to address leakage is something that water companies should directly address to dispel myths that they do nothing to tackle the issue.
- The report identifies that government is seen as the most trusted and legitimate actor to take responsibility for ensuring the sustainability of the water supply.
- There is significant potential for a taboo to be created around leaving the tap running for no reason. This could become the equivalent of what leaving a light on in an empty room is for energy conservation.



Executive Summary

Introduction

This chapter describes the motivation behind the research, as well as the objectives and scope of the project before outlining the contents of the report.

- Much of the South of England is technically under serious water stress. Despite this, there is currently little public awareness or discussion of the pressures on the water supply. There is also little understanding of the role that fairness can play in motivating attitudes to sustainable water use.
- Evidence from the study of co-operation in the management of common-pool resources suggests that fairness can be a powerful motivating factor in support for measures to manage water sustainably.
- Our hypothesis is that a focus on the ‘social context of consumption’ can trigger concerns with fairness. The three components of the social context of consumption are scarcity of supply; the impact of scarcity; and role of individuals’ personal use in causing scarcity. They form an important part of the research.

The focus groups

This chapter looks at the approach taken to the focus groups. It describes the application of the social context of consumption to water in the South of England. The chapter also provides examples of stimulus materials and exercises.

- Participants were drawn from the full range of age groups and socio-economic backgrounds. All groups were split between metered and unmetered and held in a variety of locations in the South of England. We filtered out green activists and hardened environmental sceptics.
- Exercises were designed to explore the social context of water use in the focus groups before looking at participants' attitudes to reducing water use.
- The general approach was to place participants in the role of decision-maker, providing them with relevant information and asking them what they thought should happen.
- The research does not set out to define what fairness is but rather analyses what participants articulate as fairness in response to information about the social context of consumption.

Findings Chapter 1: The Social Context of Consumption

This chapter explores discussion of the social context of consumption in the groups. These are the themes that we propose are key to allowing water use to be viewed through the lens of fairness. There are three main categories: scarcity of supply; the impact of scarcity; and role of individuals' personal use in causing scarcity.

- Participants responded strongly to the notion of limits in the

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amount of available water. Participants thought that levels of awareness about scarcity were low.

- An intuitive understanding of the impacts of water scarcity was evident amongst most participants. Whilst participants found it hard to describe some impacts as more serious than others, the overall severity of impacts motivated support for reducing water use.
- Impacts were identified across a range of areas including reduced hygiene; rising food prices; rising bills; effects on the natural environment.
- Information about wasteful and luxury use prompted the strongest reactions in the exercise about personal use. Participants thought that notions of essential and excessive use were important for creating norms around water use.

Findings Chapter 2: Fairness

This chapter explores how participants talked about fairness in the groups. It looks at the importance of awareness as a pre-requisite for any judgements about fairness relating to water use. It then sets out the characteristics of a fair water system as described by participants. Finally, the chapter identifies two important types of fairness that are drawn from different aspects of collective water use.

- Participants were unwilling to make judgements about the behaviour of others unless they thought they knew about the social dimension of water use. Fairness was contingent on participants believing the water user in question knew about the social context of consumption.
- Participants said that two essential characteristics of what a fair water system would be are co-operation and legitimate exceptions. Co-operation means everyone making an effort to reduce water use.

This also applies to government and water companies being seen to play their part. Legitimate exceptions could take the form of special medical needs or a low ability to pay for water.

- Participants largely talked in terms of two main types of fairness: resource fairness (concern with excessive use depleting the resource) and structural fairness (concern with the procedural fairness of paying for water). Each type of fairness is based on a different aspect of collective water use. The two types of fairness are not mutually exclusive. Participants were usually concerned with both.

Findings Chapter 3: Fairness and reducing water use

The chapter looks at how fairness drives attitudes to reducing water use. The chapter begins by looking at the ways in which participants discussed reducing water use. This involves looking at how reducing water use relates to the social context and to the various aspects of fairness. It then describes participants' attitudes to metering and charging and concludes by exploring issues related to communications and messaging around water use.

- Fairness was a strong driver of support for reducing water use. Participants often discussed the need to reduce water use in response to information about the social context of water use.
- Once participants understood the social context of consumption, support for universal metering was very strong. Even participants who accepted they would lose out financially by being on a meter accepted it as a fairer system.
- A rising block tariff (paying proportionally more for water at higher levels of use) was seen as the fairest way of paying for water on a meter, as long as it took into account the kinds of legitimate excep-

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tions discussed earlier. There was strong opposition to the notion of seasonality in charging tariffs.

- The language of ‘responsibility’ was seen as the most appropriate vocabulary with which to engage consumers. Analysis of participants’ views shows ‘responsibility’ in the context of water use to mean the same thing as fairness.

Conclusions and key messages

This chapter evaluates the research aims and hypothesis in the light of the analysis of the focus groups. The chapter looks at some key messages emerging from the research:

- Ideas of ‘fairness’ can be a strong driver of support for measures to reduce water use. The deliberative process explored in this research shows that information about water scarcity and harm arising from scarcity can motivate support for measures to reduce water use.
- Current levels of understanding of water use are low. Participants supported increased efforts in communicating information about water use.
- The desire for structural fairness (concern with the procedural fairness of paying for water) was a strong driver of support for universal metering amongst participants.
- Participants felt that appeals to what we call resource fairness (concern with excessive use depleting the resource) will be of limited effectiveness because this information will only resonate with those who are already environmentally conscious.
- Wasteful water use was one of the strongest drivers of pro-social anger in relation to water use. Leaving the tap running when brushing teeth was a particular trigger of such anger. Participants described notions of ‘virtuous’ and ‘stupid’ water use, with some

participants feeling that the latter should be made prohibitively expensive.

- When communicating notions of excessive use, participants felt that the language of responsibility is most naturally suited to arguments for reducing water use.
- Participants want government and water companies to work together in efforts to ensure sustainable water use. Government is seen as the most legitimate and appropriate actor to set a clear direction for sustainable water management.
- Participants felt that the current situation where some are metered and some are not presents a barrier for future attempts to appeal to fairness.

The chapter then describes some of the lessons for different stakeholders as well as exploring some of the political challenges posed by the findings of the research.

- People expect government to take a strong role in clearly directing the management of the water supply, especially in relation to implementing a universal metering programme. This report suggests that such a programme is undertaken sensibly allowing for regional diversity and cost implications to be taken into account.
- There is scope for water companies to improve their relationships with customers by better communicating their efforts in ensuring a sustainable water supply. The report suggests that the issue of investment in infrastructure to address leakage concerns is something that water companies should campaign on directly to dispel myths that they do nothing to tackle the issue.
- There is significant potential for a taboo to be created around leaving the tap running for no reason. This could become the equivalent of what leaving a light on in an empty room is for energy conservation. Almost 70% of participants admitted to leaving the tap running when brushing their teeth, around 37% did this quite or

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very often. This hints at how widespread this behaviour is.

- The deliberative process in this research shows that the social context of water use can be a powerful driver of support for measures to ensure sustainable water use. This suggests that communications to reduce water use could seek to utilise information about the social context of consumption in constructing arguments for sustainable water use.



Introduction

- Much of the South of England is under serious water stress. Despite this, there is currently little public awareness or discussion of the pressures on the water supply. There is also currently little understanding of the role that fairness can play in motivating attitudes to sustainable water use.
- Evidence from the study of co-operation in the management of common-pool resources suggests that fairness can be a powerful motivating factor in support for measures to manage the resource in question sustainably.
- We have hypothesised that what we call the social context of consumption can trigger concerns with fairness. The three components of the social context of consumption are scarcity, harm and personal use of water.

This project explores public attitudes to water use in the South of England. The aim was to investigate the extent to which people could look at the problem of water scarcity in terms of the idea of fairness and, if they could, whether this could build support for measures to ensure sustainable water use.

We investigated this through a series of deliberative focus groups which took place in Summer–Autumn 2011. These focus groups are analysed in this report.

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The motivation behind the research

Some regions of the UK are experiencing rapidly increasing pressures on water supply. As a result, the Government has an aspiration to reduce average individual water use from 150 to 130 litres per day by 2030.¹ Certain parts of the South of England experience particularly high levels of pressure on water supply and are technically areas of 'serious water stress'.² Meeting the challenge of sustainable water use in away that also protects the interests of the most vulnerable consumers will require both individual behaviour change and increased public support for measures to ensure sustainability.

There is currently little public awareness or discussion of pressures on the water supply. This is despite the increasing focus on this issue by government, the water industry, and environmental campaigners. Furthermore, the ideas of fairness and social responsibility do not currently feature prominently in strategies to build public support for sustainable water use.

Previous research suggests there is resistance amongst the public to scrutinising individual water use and to taking individual responsibility for pressures on the water supply. This is coupled with a strong tendency by people to attribute responsibility for these problems solely to water companies and government agencies.³

Evidence from other areas of behaviour suggests that one important route to building public support for sustainable water use could be encouraging the public to look at the issue in terms of fairness. We wish to explore strategies that can tap into peoples' sense of fairness around sustainable consumption in order to build public support for sustainable water use.

1. Future Water: The Government's water strategy for England, DEFRA, 2008
2. Water resources in England and Wales - current state and future pressures, Environment Agency, 2008 (Environment Agency, 2008)
3. Using Water Wisely, a deliberative consultation commissioned by CCWater, 2006

Water as a 'common pool resource'

In recent decades, a host of evidence from behavioural psychology and environmental economics⁴ has challenged the perception of people as rational, self-interested actors. This work suggests that a substantial number of people have a strong predisposition for co-operation with others. This is particularly true when co-operation is centred on the management of environmental goods called 'common pool resources'.

What defines a common pool resource? Firstly is it non-excludable meaning everyone can use it. Secondly it is rivalrous. This means that the resource is scarce and that one person's use depletes the overall availability of the resource.

Elinor Ostrom has undertaken extensive work on co-operation in the management of common pool resources in real world settings. Her work shows that in managing resources such as forests or populations of wildlife, individuals co-operate successfully under the right circumstances. These circumstances are known as a 'common property regime'. A common property regime is characterised by a set of agreed norms of co-operation as well as the ability to sanction those who do not co-operate.⁵

Can the type of co-operation that is seen in the existing evidence from managing common-pool resources be applied to water in the South of England?

Evidence from such studies of common property regimes show that whilst not all people like the norms and rules of co-operation, they see them as legitimate and fair. Furthermore the ability to punish those not co-operating is an important component of a system's fairness. This evidence suggests that a potential way to build public support for

4. For a detailed review of the evidence from cooperation dilemmas in economics and environmental economics, please see Horton and Doron, *Climate change and sustainable consumption: what do the public think is fair?*, 2011

5. *Governing the commons: the evolution of institutions for collective action*, Elinor Ostrom, 1990

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sustainable water use could be encouraging people to look at the issue in terms of fairness.

It is important to note that the project at no point set out to prescribe a definition of fairness. Our interest was instead in understanding what participants said about fairness in response to information about the social context of consumption.

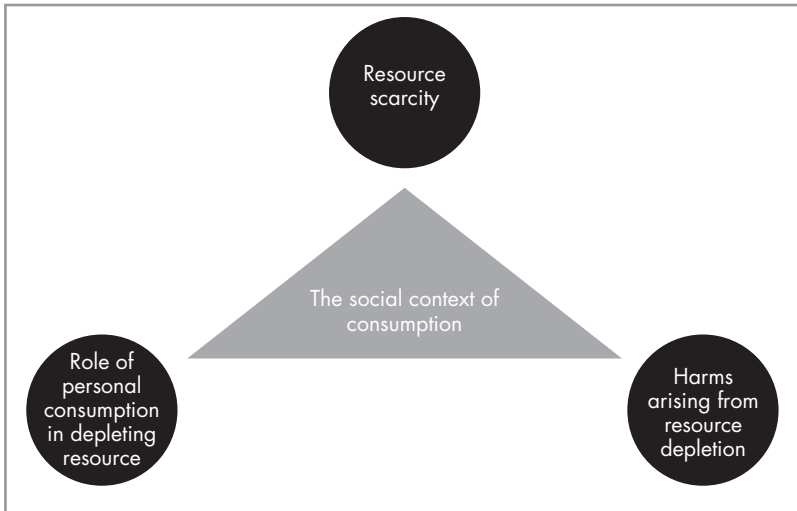
The social context of consumption

In order for people to look at their consumption of water through the lens of fairness, they first need to understand the social context of their consumption. Based on previous research by the Fabian Society, there are three important types of information that are key to understanding the social context of consumption. These are:

- Scarcity: the resource being consumed must have limits on its use;
- Impacts: there must be some harm that arises from depleting the resource;
- Personal role: people must have an understanding of how consumption depletes the resource;

The three components of the consumption triangle (figure 1.1) are each clearly relevant in the case of water use in the South of England. First, water is under stress in large parts of this region. There is a limit on the amount of water that can be taken out of the environment to supply homes and businesses. This is the 'resource scarcity' part of the triangle.

6. The social context of consumption is taken from Horton & Doron, 'Climate change and sustainable consumption: What do the public think is fair?' 2011. This report sets out in detail the theoretical basis for the social context of consumption, including more about common pool resources and the motivations behind co-operative regimes for managing environmental goods.

Figure 1 the three elements of the social context of consumption⁶

The harms arising from depleting water in the UK are numerous. Water is a crucial factor in the production of food, the meeting of basic hygiene needs, the health of ecosystems as well as being essential for all life on the planet. The harm to welfare arising from reduced consumption of water as well as the harm to the environment from the depletion of water in the South of England are both severe.

Finally, the role of individual consumption of water in the context of the UK is clear. The demand for water at the household level in the South of England has a clear link to the depletion of the resource. Around half of the water daily used in England and Wales is for household consumption purposes.⁷ This illustrates the importance of household water conservation for the sustainability of the water supply.

The concepts of scarcity, impacts and personal use are the three points of the triangle that are referred to throughout this report as 'the social context of consumption'.

7. Water Resources in England and Wales – current state and future pressures Environment Agency 2008

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Hypothesis

Our hypothesis is that information about the social context of consumption can trigger concerns with the fairness of how water is managed as a resource. This concern with fairness can build support for measures to manage water sustainably.

Research objectives

- To what extent does information about the social context of water use trigger concerns about fairness amongst participants?
- Can concerns with fairness drive attitudes to support sustainable water use?
- What do participants feel is fair in reducing water use?
- What is acceptable in terms of consumption?
- We also wish to investigate the barriers and constraints to building greater support for water use.
- More broadly we wish to explore strategies that can tap into peoples' sense of fairness around sustainable consumption in order to build public support for sustainable water use.

Structure of the report

The report begins by examining the approach taken to the focus groups. This looks at the methodology of the project including the recruitment of participants and describes the exercises used in the groups.

The findings are split into three chapters. The first findings chapter analyses responses to information about the social context of water use. The second analyses how the social context of consumption informed what participants thought constituted fairness in the water system in the UK. The

final findings chapter looks at how what participants felt constituted fairness informed attitudes to reducing water. In particular, the chapter explores issues such as metering and charging as well as communications and messaging around reducing water use. The analysis in all the findings chapters is illustrated with quotations from participants.

Finally, the report concludes by drawing out some of the main themes of the analysis and relating them to the original research objectives. The report then sets out some key messages emerging from the research.

The focus groups

- Participants were drawn from the full range of age groups and socio-economic backgrounds. All groups were split between metered and unmetered and held in a variety of locations in the South of England. We filtered out green activists and hardened environmental sceptics.
- Exercises were designed to explore the social context of water use in the focus groups before looking at participants' attitudes to reducing water use.
- The general approach was to place participants in the role of decision-maker, providing them with relevant information and asking them what they thought should happen.

The focus groups consisted of several discussion exercises. Generally speaking, the approach we used did not ask participants to reflect on their own behaviour but rather we put them in the position of decision-maker. This involved giving participants relevant information, explaining some of the trade-offs involved and asking them what they thought should happen.

Participants readily took to the approach. Participants seemed to enjoy being put in the role of decision maker and seemed comfortable with the judgements they were being asked to make.

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It is worth being hesitant about how far one can generalise the views expressed by participants when they are put in a decision-making role. It should also be noted that all deliberative processes are prone to pro-social and on occasion, anti-social bias. At times, dominant participants can influence the responses of others. Care was taken to limit these effects in moderating the groups and the analysis attempts to reflect a consideration of such factors.

Furthermore, it is hard to establish the link between attitudes and behaviour. There is no way of testing this through focus groups. It is therefore important to understand that this report explores attitudes and not behaviour change. The analysis in this report will help build an understanding of the potential for attitudinal shifts in relation to water use.

Focus group participants

The deliberative research comprised eight three-hour focus groups with 6-8 participants each. These were undertaken between June and November 2011 in six locations around the South of England (Bedminster, Chippenham, Crawley, London, Newbury, Swindon). Participants were aged between 18 – 85, and drawn from the full range of socio-economic groups as well as from a broad range of political identification. The series of groups included one specifically with older participants (over 65) and one specifically with younger participants (under 25).

We were also keen to filter out participants representing the extremes of environmental opinion, both hardened climate sceptics and committed green activists. This is not because the views of those parts of the population are not of interest but rather that our project objective is not relevant to the attitudes of those with extreme environmental views (pro or anti). We wanted to work with the broad majority of views in between the extremes.

To filter out climate sceptics we used a statement from DEFRA's survey of attitudes to the environment (DEFRA, 2007) and strong agreement with

this statement was taken to indicate climate scepticism. The question was asked twice, once at the recruitment stage and once just before the groups:

- "The So-called 'Environmental Crisis' facing humanity has been greatly exaggerated"

To filter out committed green activists we used a further statement from DEFRA's survey. Again the question was asked twice, once at the recruitment stage and once just before the groups:

- "I would be prepared to pay more for environmentally friendly products"

As a result of the recruitment process we ensured that no participant strongly agreed with the statement. As an additional step we filtered out members of pro-environmental non-governmental organisations such as Greenpeace or WWF.

As well as filtering out committed green activists and climate sceptics, we recruited to reflect a balance between metered and unmetered participants in the groups. In addition, we ensured that participants were responsible for paying their own water bills (the only exception to this was half of the under 25s group who still lived at home with their parents). We also filtered out water company employees and plumbers to ensure that such participants did not dominate the discussion from a position of expertise.

Once we had recruited our participants, we wanted to understand better the composition of our groups and to develop an approach to enable us to analyse how participants' environmental attitudes changed during the discussions. For this purpose we used DEFRA's environmental framework (DEFRA, 2008) along with the associated segmentation methodology.

DEFRA's framework splits the UK population into seven segments on the basis of their responses to a survey of attitudes and behaviours: Positive Greens, Waste Watchers, Concerned Consumers,

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Sideline Supporters, Cautious Participants, Stalled Starters and Honestly Disengaged. Each segment denotes a distinct set of attitudes and beliefs towards environmental issues and behaviours. Appendix I contains a more detailed description of each.

Using a 'combined block method' developed by DEFRA for its segmentation technique, we analysed our participants into these seven segments. Table 1 shows the proportion of our participants in each segment compared with that among the population as a whole.

Table 1 Proportion of people in each DEFRA segment (before the focus groups) and DEFRA's estimate for the UK population (2008)

Segment	Proportion of focus group participants in each segment	Share of UK population in each segment
Positive Green	8%	18%
Waste Watcher	19%	12%
Concerned Consumer	13%	14%
Sideline Supporters	14%	14%
Cautious Participant	15%	14%
Stalled Starter	11%	14%
Honestly Disengaged	20%	10%
Total	100%	100%

Table 1 demonstrates that our participants were weighted slightly towards the less 'environmentally friendly' end of the segmentation spectrum. We had significantly less Positive Green participants than the population as a whole; this would be as a result of filtering out committed green activists. We had a high number of Honestly Disengaged participants, double the level in the UK population. It is important to note that as a result of our recruitment process, participants were identified as Honestly Disengaged because they were resistant to behaviour change, rather than being climate sceptics.

Stimulus material

Groups began with a general discussion of awareness around water use. Following this the groups would then explore the material on the social context of consumption. We altered the order in which this material was presented but the basic exercises remained the same.

The notion of scarcity was presented along with a map prepared by the Environment Agency detailing levels of water stress by regions in England. Specifically we wanted to explore the idea that there is a limit on the amount of available water we can take out of the environment to supply homes and businesses.

The idea of impacts in the group was explored by eliciting suggestions from participants as opposed to presenting them with pre-prepared material. This was because we wanted to explore the extent to which harm arising from water scarcity was intuitive to participants.

Personal use was explored through an exercise in which participants were invited to guess the amount of water (in litres) that different activities used. Participants were presented with a litre bottle of water to assist them in visualising overall volumes.

Another exercise focused on inequalities of water use. This took the form of a discussion in response to a graph illustrating inequalities of water use by litres per person per day. This was then closely followed by presenting fictional characters. Each character had a different lifestyle that correlated to an overall volume of water use allowing participants to relate behaviour to the graph on inequalities of water use. Most of the focus groups used just three characters: a high-income individual with a high volume of daily water use; a middle-income individual with a just above average volume of daily water use; and a low-income individual with a slightly below average volume of daily water use.

Various further exercises were used to discuss possible approaches to reducing water use, including an exercise on the principles of different water charging systems and tariff design. There were also more general

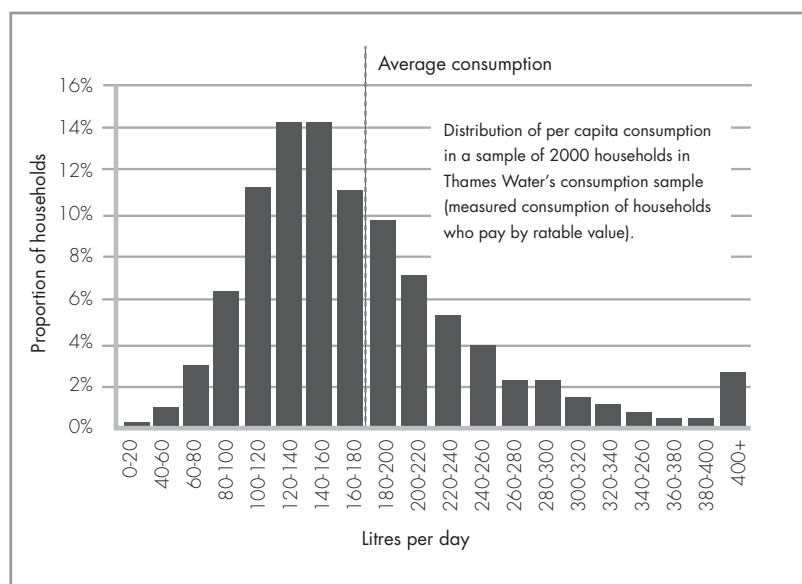
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policy discussions allowing participants to discuss the relative merits of different policy approaches (e.g. voluntary, compulsory) as well as discussing the responsibility of different institutional actors.

As the project progressed, we developed some new exercises to explore emerging areas of interest. These included an exercise where participants were asked to discuss the merits of different phrases for describing water use. Another exercise used in some groups involved participants choosing information from a range of options relating to different elements of the social context of consumption. Participants were then asked to construct resonant arguments in a debate setting.

Examples of some of the stimulus material used can be seen below.

Examples of stimulus material



The graph above is reproduced with kind permission from WWF. The original is taken from The Itchen Initiative – smarter water management for people and nature (2011)

Examples of stimulus material

Jeff



Single, age 32. Lives in a large house in Kensington with a hot tub, swimming pool and power showers. Has a large garden with an expensive sprinkler system. Drives a 4x4 and a Porsche which he likes to wash regularly.

Average water use: **340 litres per day**

William



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Single, age 68. Lives in a flat (no garden) Doesn't drive; relies on public transport. Doesn't have a bath so takes showers. Doesn't have a dishwasher so washes up in a bowl.

Average water use: **110 litres per day**

Vera



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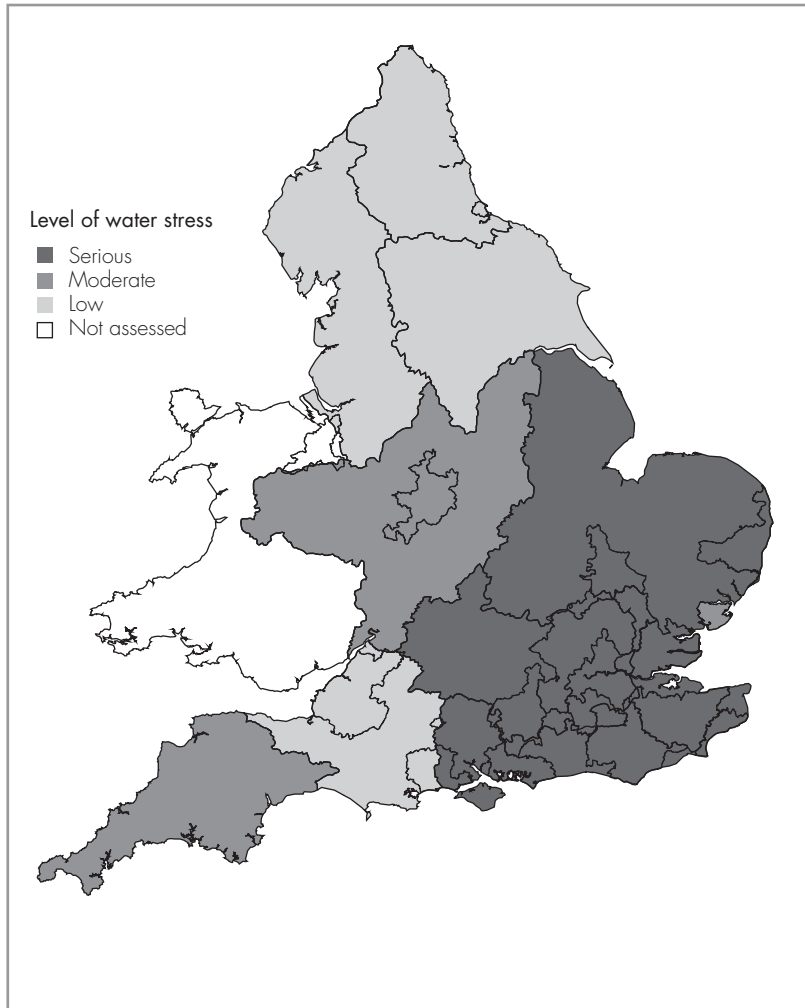
Single, age 45. Lives in a fairly large suburban maisonette. Uses a watering can for her small garden. Has an old dishwasher and washing mashine. Mostly showers but likes the occasional bath.

Average water use: **160 litres per day**

Activity	Guess	The answer
Brushing teeth without leaving the tap running twice a day		
Brushing teeth with the tap running twice a day		
Flushing a dual-flush toilet 5 times a day		
Power shower for 5 minutes		
Running the average bath		
Using the sprinkler for one hour		

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Examples of stimulus material



The map above draws on data from the Environment Agency report *Water resources in England and Wales – current state and future pressures* (2008)



Findings 1 | The Social Context of Consumption

- The groups began by exploring the social context of consumption. The three areas of the social context are the scarcity of the resource, the harm arising from depleting the resource and the role of personal use in contributing to scarcity.
- Participants responded strongly to the notion of limits in the amount of available water. Participants thought that levels of awareness about scarcity were low.
- An understanding of the impacts of water scarcity was intuitive amongst most participants. Whilst participants found it hard to describe certain impacts as more serious than others, the overall severity of impacts motivated support for reducing water use.
- Information about wasteful and luxury use prompted the strongest reactions in the exercise about personal use. Participants thought that notions of essential and excessive use were important.

This section looks at participants' responses to information about scarcity. The notion of limits was central to the idea of scarcity in our focus groups. We reasoned that understanding that a resource was limited was fundamental to being concerned with how that resource was then distributed and managed.

Before discussing scarcity, participants were often asked for their initial thoughts on water. It was during this open discussion that a lot of the common barriers to engaging with water efficiency were explored.

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Some participants articulated a feeling of confusion in relation to the workings of the water system. This included a belief that sea water was part of our water supply system.

Male 1: There seems to be a lot of rain, but also a lot of drought.

Female 1: Well I can never understand that we're an island and yet we have droughts, in all my years it has never ceased to amaze me.

[Swindon]

The initial discussions about water also drew comments expressing anger towards water companies. The basis for this anger was usually a perceived failure by water companies to maintain infrastructure. Most groups contained people who thought that leakage from supply pipes was a big problem. Participants who displayed some of the strongest resistance to any notion of scarcity were often also the ones who displayed the strongest anger towards water companies.

Their [water companies] lack of ability to maintain their water ways, and we pay a fortune, and that's why there are so many shortages, because there's water wasted through an inability to maintain their supply systems.

[Male, Chippenham]

Participants responded strongly to the idea of limits to the level of water supply. In most groups, this idea initially provoked comments about population levels. This was perhaps unsurprising as the areas under serious water stress on the map were in the South of England and particularly around London. The link with population was therefore obvious to most participants.

If you look at populations in those areas, you'd probably find there were more people in those red areas, especially if you take London into account.

[Female, London]

Many participants expressed a feeling of surprise in relation to levels of water scarcity. There was a sense from participants that they considered the information quite serious. This often led to assertions that awareness should be higher in the public domain.

They could advertise or publicise the fact that it's not an unlimited resource as most people might think. To be more aware of every individuals' water usage because it could have an impact in the near or distant future.

[Male, Swindon]

Even when participants felt that they were aware that water stress was an issue, they were often surprised by the size of the area under serious water stress.

There's a lot more areas of red (colour indicating serious water stress) than I expected.

[Female, Swindon]

A common response to the information about limits was an eagerness amongst participants to talk about how to solve the problem of water scarcity. This was often in terms of fixing infrastructure such as reducing leakage from supply pipes or building new reservoirs. When participants were told that building more reservoirs would equate to taking more water out of the environment this often reinforced the desire to talk about solutions to the problem.

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Moderator: Building more reservoirs and creating more infrastructure, that would be taking more water out of the environment. Going back to the idea of limits, what are your thoughts about that?

Female: Your point about reservoirs is interesting, because if that's the case then how are we to do anything about it? I mean the only option is to use less water.

[London group 3]

There was occasional resistance to the idea of water scarcity amongst some participants. This resistance often returned to the theme of mistrust in water companies and/or decaying infrastructure.

That map would be completely blue (low water stress) if the water companies maintained their systems.

[Male, Chippenham]

There was a difference in the responses offered by the group consisting of older participants and the group consisting of younger participants. The group of older participants showed a strong resistance to the idea that there is a limit on the amount of available water.

I've never heard a scientist say it's stopped raining; I come back to what I originally said. There is rain and there is water, it's how you use it and how you keep it.

[Male, Crawley]

In the group of younger participants there was no questioning of a scarcity problem. It was as if the idea of limits was an obvious one.

I don't find it surprising because there's not an unlimited supply of anything.

[Male, Newbury]

Some participants responded to the idea of there being an overall limit on water by suggesting that there should then be a limit on individual use. This idea brings about important questions of what constitutes fairness (more of which will be looked at later).

People who are using excessive water could be limited in what they're using and there could be more made available for everybody else

[Female, London group 3]

Some responses to information about scarcity talked directly about fairness

If there is a genuine shortage of something and somebody says well sod everyone else I'm going to have all of those biscuits it's unfair on everybody else isn't it?

[Male, Crawley]

Impacts

Participants had an intuitive understanding of the harms arising from water stress. Participants talked about a wide range of different impacts. Common themes included: hygiene; effects on business and industry; effects on food prices and the wider economy; the rise of water bills; the inconvenience of accessing water in moments of serious stress.

Participants found it hard to single out any impacts as being "the most serious". Participants usually stated that it was hard to do so because water was essential to so many aspects of our standard of living.

We use it so much in every single aspect of everything. In cooking, washing, so many aspects that you don't think of. I think it would have a massive impact.

[Male, London group 2]

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As well as citing the inconvenience of using water under extreme episodes of shortage (such as standpipes in the street being the only source), some participants also hinted that it could lead to conflict.

I think after a couple of days people would get quite frustrated and tempers would flare.

[Male, Bedminster]

Participants often responded to the discussion of impacts by suggesting that we need to manage the water supply better. This shows that the idea of harm is a very powerful part of the social context of water use.

It's one of the most valuable assets we've got; we should be looking after it better than we do, this is what it's all about perhaps. We can live without electricity... we would die without water.

[Male, Chippenham]

It was only a minority of participants that mentioned the potential impact on the natural environment. Even then, this was often expressed in terms of the benefits the environment provides for humans. For example, the impact was linked to aesthetic aspects such as a loss of green space. It was an even smaller minority who talked specifically about the effects on species and habitat. This was perhaps unsurprising given that we had filtered out green activists.

Personal Use

This section looks at participants' responses to information about the amount of water different activities use. One of the main purposes of presenting this information was to see how it interlinked with issues of

scarcity, impacts and fairness. Our hypothesis was that awareness of your personal role in using water was central to understanding the social context of water use. In addition, this awareness also has the potential of signalling your ability to mitigate a water scarcity problem.

The information about the different volumes used by various water activities that elicited the most surprise were either the sprinkler system or the difference in brushing your teeth with the tap running or not. The information with which participants were presented in the groups can be seen in the table below. This was taken from a study commissioned by CCWater.⁸ Responses to this information were similar across all groups.

The idea of necessity in using water was very important to participants' judgement of what made for essential water use. It was an absence of any necessity to leaving the tap running whilst brushing your teeth that made it so easy for participants to condemn this behaviour. In addition, there was an issue of scale as participants expressed a view that this behaviour was probably quite widespread.

Female: Brushing your teeth two times a day with the tap running. Imagine how many people do that.

Male: Definitely, that's ridiculous.

[London group 2]

If the principle of necessity was so strong for condemning leaving the tap running, then what about reactions to the information about sprinklers? The range of comments indicates that there were a number of issues at play.

8. Using Water Wisely, a deliberative consultation commissioned by CCWater, 2006

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Table 2 Information on personal water use presented in the focus groups

Activity	Volume of Water Used (litres)
Brushing teeth without the tap running twice a day	0.5
Brushing teeth with the tap running twice a day	50
Flushing a dual-flush toilet 5 times a day	22.5
The average shower	45
Using a power shower for 5 minutes	100
Running the average bath	100
Using an average sprinkler system for 1 hour	500

The first element driving responses to sprinklers was the high volume involved. It was the activity using the largest volume of water used presented in the stimulus material. The use of sprinklers was much higher than more common activities such as going to the toilet or having a shower.

The second element of the strength in response in relation to sprinklers was to do with the luxury element of its use. Participants readily used the language of luxury to describe the use of sprinklers and other high-using behaviours.

Jeff (high using character) has many luxuries compared to other people who just have necessities. He has luxuries.

[Male, London group 1]

The other behaviour that was linked to the idea of luxury was the power shower. A particular reason the power shower was seen as luxury is because it was presented alongside information about a more efficient alternative. The normal shower used less than half the amount of water.

I think we've got to say, look, just have a shower. I think a power shower is a luxury in that respect.

[Male, London group 2]

The idea of wasteful behaviour was a strong driver of attitudes to reducing water use. It was leaving the tap running whilst brushing teeth that related most strongly to this notion of waste. Many participants talked about the importance of cutting out wasteful water behaviour in society.

Anything that's wasteful – I mean really wasteful like leaving the tap running – there's no purpose for that so you expect everyone to stop doing that.

[Female, Bedminster]

There was some disagreement amongst participants as to what constituted wasteful and necessary water use. For example, some participants argued that sprinklers, although used to water plants were wasteful because the necessity in question was not essential for health.

The idea of luxury was important for arriving at the concept of essential use. It was often felt that behaviours that served basic hygiene functions such as showers or going to the toilet were the most essential. Discussion around essential use saw participants acknowledge the role of luxury usage in helping to clarify what constituted average and essential levels of water use.

I think we need to be realistic so it's about finding that threshold that the average household needs as essential and what's luxury.

[Female, Bedminster]

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Participants expressed a desire to create a norm around essential use. This idea has strong distributive components to it. It relates to the concept of 'fair shares' i.e. the fair distribution of access to a scarce resource. This concept only makes sense when a resource is limited. The implication is that participants were motivated by notion of limits on the amount of available water.

You've got to take an average and say 'this is a fair usage'

[Male, Crawley]

In contrast, participants were almost always reluctant to condemn overall volumes of water use. They were far more comfortable condemning specific behaviours. We've seen that participants condemn some use because it is seen as pure waste and serves no purpose. Separately, participants condemn particular behaviours because they may be deemed to be merely a luxury. In addition, the condemning of luxury behaviour was usually related to a hierarchy of necessity. This was reflected in behaviours serving hygiene functions being seen as the most essential types of water use.



Findings 2 | Fairness

- Participants were unwilling to make judgements about the behaviour of others unless they thought that they too knew about the social dimension of water use.
- Two essential characteristics of what participants felt constituted a fair water system were co-operation and legitimate exceptions. Co-operation means everyone making an effort to reduce water use. This also applies to government and water companies being seen to play their part.
- Participants largely talk in terms that can be categorised as two main types of fairness: resource fairness (concern with excessive use depleting the resource) and structural fairness (concern with the procedural fairness of paying for water). Each type of fairness is based on a different aspect of collective water use. The two types of fairness are not mutually exclusive. Participants were usually concerned with both.

The analysis of what fairness was for our participants should not be taken to suggest that participants were model citizens motivated purely by co-operation and fairness. There was also a strong concern with issues such as the level of bills as well as general cynicism towards water companies. In particular, analysis shows that often a desire for co-operation in reducing water use was driven by a belief that others would not co-operate if left to their own devices. This

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fits with the evidence from common property regimes discussed in the introduction to this report.

Pre-requisite of fairness

This section looks at what we have identified and termed the pre-requisite of fairness. A recurring theme throughout the groups was the reluctance of participants to make judgements about the behaviour of others. Participants were not willing to judge the behaviour of others unless they thought that they too knew about the social context of water use.

Awareness of the social context of water use is essential to making judgements about fairness. Participants expressed that if someone had knowledge of water scarcity, impacts and the amount of water they used, only then would it be appropriate to make a judgement as to how fair or unfair their behaviour was. This sentiment was most strongly expressed in relation to the fictional high-use character.

The participants believed that the idea of fairness is only relevant if people are aware of the social context of water use. At certain points in the groups, we asked participants if the word fair was appropriate to describe inequalities in usage volumes. Participants almost always responded that awareness (knowledge of the social context of water use) was a strong pre-requisite.

I don't think it's the right word because I don't think Jonathan (high using character) is actually aware of how much he's using.

[Female, London group 2]

Participants always wanted more information about the context of water behaviours discussed in the groups. In almost every group, when responding to information about the inequalities of water use in volumes, participants wanted to understand the context of the use in question. It is interesting to note that not only were participants interested in high volumes of use but also in users with very low volumes. There was a

sense of suspicion that these users were spending lots of time in other places where they used water such as at work, the gym or a partners' house.

(in response to whether unequal water use was fair)
The question is irrelevant in itself. You can't just say that unless you know circumstances.

[Male, Chippenham]

But no one's gone to Jeff (high using character) and told him the water supply is very limited. Unless you can go and tell him that the water supply is in a critical condition then you can't say it's unfair

[Male, London group 3]

Some participants expressed a view that awareness-raising was an adequate solution to the problem of water scarcity. This was often linked to an example of how recycling has become more common due to heightened awareness:

I think you have to give people credit. I think people are more socially responsible. You know years ago, we didn't recycle, we've all been educated to do that, people are becoming aware of their carbon footprint... So I think we need to give people respect so that they can learn more about the amount of water they're using.

[Female, London group 2]

Other participants expressed an opposing view that even with higher levels of awareness, there would still be excessive use:

I just think no matter how much you educate people there will always be those who don't care. It's the same

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with recycling; it's the same with fuel, bikes. There will always be those people who travel by bike, recycle. But their next door neighbour won't give a damn.

[Female, Bedminster]

This tension between the two views expressed above was an interesting component of later conversations about fairness. It was the opinion that awareness itself was not enough that stimulated a lot of the discussion about co-operation and of compulsory measures to reduce water use.

Characteristics of a fair water system

This section looks at the kind of water system that participants felt was fair. This emerged from responses to a range of information about collective water use. There were two main characteristics of the kind of system that participants described as fair. These were notions of co-operation and of legitimate exceptions.

Male 1: When it comes to fairness, fairness means we should all do it and if everybody's not doing it, it's going to be difficult.

Male 2: But how are you going to do that? What about a hospital or something that needs a massive amount of water?

[London group 2]

The first characteristic of a fair water system was co-operation. If we were to reduce water use as a society, it was seen as important by participants that this was a co-operative endeavour. Co-operation in this context means being part of a collective scheme to protect or maintain the water supply. It is the opposite of free-riding which represents opting out of the collective scheme whilst still enjoying its benefits.

We identified co-operation to function at two main levels. We have called these ‘individual co-operation’ and ‘institutional co-operation’.

Individual co-operation was pitched at the level of a community of individuals (be this at street, neighbourhood or national level). Co-operation here meant that members of this community were all engaged in a collective effort to reduce water use. This was usually expressed in a sense that participants would feel annoyed if they were playing their part in reducing water use and a neighbour not.

If I’m going to do it, everybody’s got to do it.

[Female, Swindon]

Participants wanted to know that if they were going to take steps to ensure they used less water, that others would do the same. This view is typical of what behavioural economics refers to as a concern with free-riders.⁹ A concern with free-riders is very closely linked with the social context explored in the last chapter. The following quote makes a clear link between an awareness of the social context and the need for co-operation in reducing water use. It also implies an element of disrespect towards those who are making attempts to reduce their water use.

If there’s a knowledge that things are going to get worse, and people are wasting [water] then that doesn’t seem fair on people who are trying their best.

[Female, Bedminster]

Institutional co-operation was pitched at the level of government, water companies and communities of individuals. Participants often expressed that if they were required to reduce their water use, they would want to see government and water companies taking a lead too. This could be in

9. An important milestone in the work on free riders in the context of managing environmental goods is Garret Hardin’s 1968 essay ‘The Tragedy of the Commons’.

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the form of water companies reducing leakage. Alternately, it could refer to government setting the right regulation to ensure that water companies and individuals complied with water reduction targets.

If it was just the water company. It would almost be like 'what's in it for them? Where's the catch?' If it's a combination of a company, government, local authority and an environmental group, if all three did a campaign they're covering all bases.

[Female, London group 2]

I think they could work together, because the [water] company knows more about how it works than government, but not just the government, either an environmental group or an electric company who worked with them [as well].

[Female, London group 2]

To be honest, the water companies, the people who haven't got much money, the people who've got loads of money, everyone's got to do their bit.

[Male, Chippenham]

The second characteristic of a fair water system was that it took into account legitimate exceptions. Participants recognised that in a push for co-operation in reducing water use, there would be exceptions at both ends of the abilities spectrum.

What made an exception legitimate? This could be because a user had high water requirements that they could not control. For example, this could be in the form of special medical requirements. Those on low-incomes or with large families were also seen to constitute legitimate exceptions in some circumstances.

These circumstances were essentially linked to their level of water use. If users were deemed to use water responsibly but still had issues of affordability, then this represented a legitimate exception. The idea of responsible water use in legitimate exceptions was linked back to the principle of necessity in water use.

I think there's a difference between what you need to use and what you want to use as a luxury. I think Jeff [high-using character] is using it [water] as a luxury. He doesn't need to wash the cars but if you have a medical requirement then you need to, so there's a need and a want there

[Female, Newbury]

Participants were also concerned about those with a high ability to pay becoming exempt from co-operation. It was felt as if those on very high incomes would be able to escape the burdens of co-operation in reducing water use. Some participants felt the price of water at a high volume would have to increase significantly to reflect this 'exception at the top'.

Resource fairness and structural fairness

This section looks at the two main types of fairness that participants discussed in response to information about water use. Each type of fairness relates to a different aspect of collective water use. We have called these resource fairness and structural fairness.

Resource fairness refers to the unfairness of the excessive use of others depleting the overall level of available water. Resource fairness can perhaps be termed as typical of a more environmentally motivated world view. In participant's articulation of resource fairness, it is the depletion of the resource that is the main source of fairness concerns.

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Structural fairness refers to a concern with the rules of engagement (clear, fair charging structures) in managing water use. Structural fairness is concerned with the monetary value of, and the ways in which people pay for water. It is essentially a desire for a level playing field in the way water use is measured and paid for.

One of the best ways of illustrating the difference between resource and structural fairness is through the idea of pricing. Structural fairness is centrally concerned with pricing and the procedural fairness of paying for water. In contrast, participants who saw resource fairness as the main problem in collective water use tended to think that paying for what you use was not a legitimate excuse for high water use. The point was to preserve water as a resource.

We're not talking about the price of water going up for
the rich, we're talking about trying to save water.

[Female, London group 1]

Resource and structural fairness are in no way mutually exclusive. Most participants showed evidence of being concerned with both. There were however examples of participants who rejected any notion of resource fairness but were passionate advocates of structural fairness. Furthermore, the participants most resistant to notions of scarcity were also some of the most passionate advocates of structural fairness (see appendix II for more detail on such participants).

Why was it that the strength of responses was more heavily weighted towards structural fairness? The analysis suggests that a few issues are at play in explaining this.

Firstly, it was seen as unfair that people could pay for water in different ways. Participants felt strongly that if someone is using a high amount of water, it is deeply unfair for that person to pay the same as someone trying to conserve water.

Well if you're living on your own as one person, and you're paying the same as a family of six, which I think you do, then I think there's something not quite right.

[Female, London group 2]

Structural fairness matches with what behavioural psychology and environmental economics teach us about common property regimes. It is often the ability to sanction those who use a resource excessively or do not participate in its management (known as free-riders) that allows for greater co-operation. Evidence from studies of such common property regimes show that when the sanctioning mechanism does not function, the willingness to co-operation often deteriorates.

Participants often displayed signs of pro-social anger in discussing structural unfairness. It was felt that an uneven playing field violated any sense of fair play in managing water resources.

I was going to say that if all those people are paying the same amount, and yet some people are using 150 and some people are using 50, is that fair?

[Female, London group 2]

Some participants made comparisons with other utilities to illustrate their problems with structural unfairness. This analogy was commonly used to display what to them was the bizarre system of unmetered water use:

I can't think of any other utility where you don't pay according to how much you use. If you rinse (use

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excessively) your phone you're going to get a big phone bill. If you use the heater too much you're going to get a big gas bill.

[Male, London group 2]

One participant expressed this point by stating that if you were to design a system of paying for water from scratch it would definitely not be an unmetered one.

How could anyone think of having an unmetered system? It has to be a metered system so people pay for what they use.

[Male, Chippenham]



Findings 3 | Fairness and reducing water use

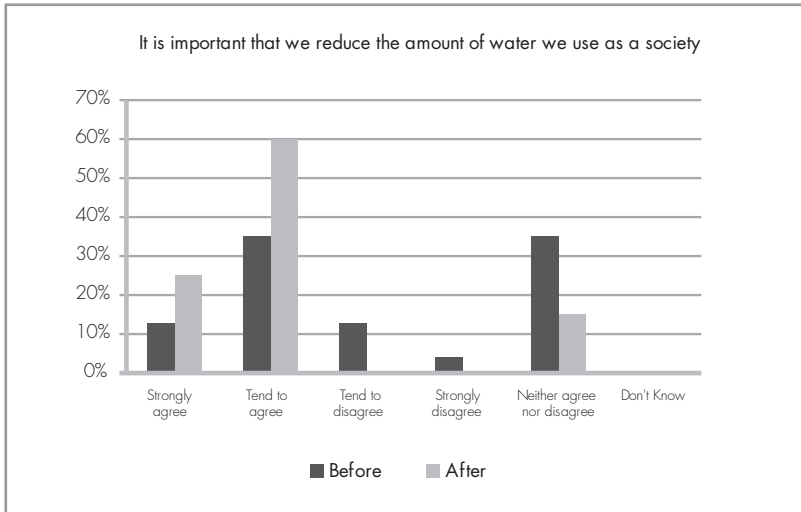
- Fairness was a strong driver of support for reducing water use. Participants often discussed the need to reduce water use in response to information about the social context of water use.
- Once participants understood the social context of consumption, support for universal metering was very strong. Even participants who accepted they would lose out financially by being on a meter accepted it as a fairer system.
- The rising block tariff was seen as the fairest way of paying for water on a meter. This was as long as it took into account the kinds of legitimate exceptions discussed earlier in the report. There was strong opposition to the notion of seasonality in charging tariffs.
- The language of responsibility was seen as the most appropriate term to use in describing levels of water use. Analysis of participants' views shows 'responsibility' in the context of water use to mean the same thing as fairness. Information about short-term impacts and personal water use were the most important for constructing resonant arguments to reduce water use.

This section looks at how fairness drove attitudes to reducing water use. It explores whether participants thought it was important to reduce water use. It does this by looking at what role fairness played in motivating support for reducing water use. The section finishes by looking at how fairness also motivated views about the ways in which we should reduce water.

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As figure 3 below shows, there was a strong shift amongst participants in support for the importance of reducing water as a society.

Figure 3 Views on the importance of reducing water use, before and after groups



All the groups featured detailed discussion about the importance of reducing water use. It was often in response to the information about the social context of water use that participants would begin to suggest ways in which water use could be reduced. Some participants felt that the responsibility for reducing water use lay primarily with water companies in maintaining infrastructure. The majority of participants did however acknowledge the importance of reducing water use at an individual level too.

The groups often went straight into devising methods to reduce water during discussions of the social context of water use. In many groups, it was often the discussion of harms which prompted participants to

reflect on the need to reduce water use. One participant responded to a mention of water shortage impacts by calling for compulsory measures to reduce water use.

Female 1: Water bills would go up, because it would be more precious wouldn't it?

Female 2: But in some ways there should be more control of water because we take it for granted, we use a lot, and probably more than we need to... if there was a certain amount which could go to some houses... I don't know the technical side but it just seems there could be more monitoring before it gets to the point where we're having to travel to collect water.

[Bedminster]

Often participants would suggest ways of reducing water in response to the information about how much water different activities use.

They always have taps in public toilets that turn themselves off. That would definitely be a way of cutting down usage.

[Male, Chippenham]

Participants were asked whether they favoured compulsory or voluntary approaches to reducing water use. This was often in relation to metering because this was usually suggested by participants as the first step in a collective attempt to reduce water. A few participants displayed strong resistance to the idea of compulsion

Personally I'm against monitoring and regulation – I think we're monitored and regulated within an inch of

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our lives... I think if there were oppressive measures to monitor water usage I personally find that objectionable.

[Female, Swindon]

A much larger number of participants held opposing views and expressed strong support for compulsion. This was usually argued as being central to fairness.

I think it's a bit unfair that people like William (low using character), who are making concessions and giving up certain things to try and reduce it, being discounted by people like Jeff (high using character) who don't care. In some ways it should be less about personal choice and more forced, what we have to do

[Female, London group 3]

Participants listed a large number of different ways to reduce household water usage. There was some interest in more efficient appliances and often education was seen as a very effective tool to shape the habits of the next generation. When asked how to motivate reduction amongst those with their habits already formed, many participants were adamant that this could only be done through price signalling.

Metering and charging

The section explores how fairness related to metering and charging. The view that metering was the fairest system of charging for water was one of the strongest areas of consensus amongst participants. Notwithstanding the views of participants who opposed compulsion in

principle, many participants supported the idea that universal metering should be compulsory. We examine how this support was driven by fairness.

Discussions of reducing water use in households centred on metering and charging. This is perhaps unsurprising as paying water bills is the primary way in which people interact with the management of the water. Fairness was integral to the discussion around metering and charging.

The current system of some people being metered and the majority unmetered was seen as deeply unfair. The reflections on the fact that some people can use as much water as they like and pay the same bill as someone who is saving provoked some of the strongest responses in the group.

I think the current system where some people are metered and some people aren't is the unfairest system.

[Male, Bedminster]

To not pay for a scarce resource by the amount that you use seemed to participants a strange concept.

Why do we pay this way for water? I don't know why we think it's so different because it's your usage isn't it?

[Female, Bedminster]

I can't think off-hand of one reason why you should have unmetered

[Male, Chippenham]

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Universal metering was overwhelmingly seen as an essential part of a fair water system. Participants felt that by ensuring everyone paid for what they used, the water system took into account the inequalities of water use. In a sense, metering provided the mechanism through which excessive users would be penalised.

The meter is fairer. If you're aware of what you're using and you are trying to save the money and help the environment then I think you should reap the benefits of that. And if you don't care you should pay the penalty.

[Female, Chippenham]

Even participants who opposed the idea that metering should be compulsory accepted that it was the fairest system of paying for water:

I think metering is the fairest system but I don't think anybody should be told.

[Male, Chippenham]

An attractive component of metering was that it took away the need for participants to judge high users. Given the nature of water use, it is unsurprising that participants were resistant to making judgements of others' use. In many senses water is a private resource and many of the activities related to using it are deeply personal.

That's why metering is fair, because you're not making that judgment you're just saying, you pay for what you use.

[Female, Chippenham]

The strength of support for metering is perhaps best exemplified by

those participants who acknowledged that whilst they would not personally be better off under a metered system, they accepted that it was the fairest system.

I would personally be quids in if I could go back to the old (unmetered) system. However, I don't think it's fair if I did.

[Male, Bedminster]

Male 1: How could anyone think of having an unmetered system? It has to be a metered system so people pay for what they use.

Female 1: I'm unmetered and I would accept it.

[Chippenham]

Whilst ensuring co-operation with a collective scheme to manage water use sustainably, metering was still subject to allowing for legitimate exceptions to be considered fair:

The only way that (metering) might not be fair is in the cases where people have a specific need for water, a health need.

[Female, Bedminster]

The rising block tariff was felt to be the fairest way of charging for water on a meter. Participants often articulated the principles of the rising block before being presented with any information about it. Interestingly, the rising block principles were often arrived at during a discussion of imposing limits on individual users.

Female 1: I think everyone should be on a limit, and once you hit that limit that's it. You don't get anymore

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water, or you should start paying for it, or just get everyone on a water meter.

Moderator: So everyone should have an allowance?

Female 1: But that's very difficult to regulate because some people need more water than others don't they? So people who are ill, who need to be cleaned more often, you'd need to regulate it carefully.

Male 1: There could be some kind of virtuous use of water, and stupid use of water, and we should be fined if we use it stupidly.

[London group 1]

The principle of seasonality in tariffs was deeply unpopular with participants. The idea of putting prices up in the summer seemed to go against common sense.

Would bosses put wages up in the summer?

[Male, Bedminster]

Participants questioned whether the principle would run in reverse.

Why should the price go up if it's hot and not go down if it's wet?

[Female, Newbury]

Participants resented what they saw as the idea that the sun coming out would make water more expensive. The stereotypical British Summer was also felt to be quite wet which added to the level of opposition expressed:

Female 1: Given that it rains through the summer in Britain
I don't think that's really very good

Male 1: I agree. If you've got a drought, OK, fine. But if you have a summer when it rains are people going to happy?

[Chippenham]

Many participants were concerned that a fair charging system had to take into account the need for reasonable exceptions. This was often in relation to those with a low ability to reduce. A common example was large families.

Male 1: ...the only way people will use less is to make it more expensive

Male 2: I think you're right but I think that if you go over a certain amount then you could start being charged more and more, and OK, there are going to be people who have some disabilities or circumstances where they need more water, and you could find a way of taking account of that.

[Chippenham]

Communications and messaging

This section looks at lessons for communications and messaging provided by how people engaged with the idea of fairness in the context of reducing water use. The section looks at what kind of language is best suited to fairness arguments for reducing water use. Also explored are the components of information most suited to constructing resonant arguments for reducing water use. The responsibility of different institutional actors in communicating about reducing water use is also discussed.

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Participants felt that responsibility is the most appropriate phrasing for talking about the need to reduce water use. Whilst fairness was used to describe views on metering, when it came to water use more generally, participants felt the language of responsibility was more appropriate.

It is interesting to note however that participants felt that responsibility was appropriate because it implied a responsibility to a community of water users. This suggests that in the context of water use, fairness and responsibility are essentially interchangeable.

I think responsibility is a word you use if you buy into a community as opposed to being self-centered.

[Female, London group 3]

Other types of language for describing high water users such as 'anti-social' or 'selfish' were seen as too harsh. Words such as 'considerate' or 'community-spirited' were seen as inappropriate for describing lower water users. Some participants reasoned this by using the pre-requisite of fairness.

How can you be considerate when you don't know how much other people are using?

[Male, Crawley]

It is important to note that in stating that responsibility was the most appropriate term for describing water use, participants were asked to think about how the wider public would respond to messaging using these terms. Whilst participants used the language of fairness repeatedly themselves, they didn't believe others would be receptive to this. This is linked to the pre-requisite of fairness outlined in the previous chapter.

The interchangeable nature of fairness and responsibility in relation to water use can be seen in the manner in which participants use the language of responsibility. This participant illustrates this point by suggesting an element of citizenship in ensuring sustainable water use:

I would still like to be assured that there is a genuine shortage of water and if that was the case, then obviously we should all be responsible citizens and watch how much water we use.

[Male, Crawely]

Wasteful behaviour and short-term impacts were the most important pieces of information in communicating the social dimension of water use. It was often in response to either information about the amount of water different activities use or during the discussion of impacts that participants began to assert the importance of reducing water use.

Information about the impact to the environment or the long term sustainability of the resource were seen as being less resonant for making arguments to reduce water use. Whilst they were deemed important, participants felt that this kind of information would only reach out to those with an already environmentally conscious outlook.

Participants felt that both government and water companies had a big responsibility in communicating the need to reduce water use. This reflected the importance of institutional co-operation for what participants felt was a fair water system.

One of the main concerns driving support for institutional co-operation was a suspicion of water companies. Participants often stated that they didn't want to see the responsibility for ensuring a safe and fair water supply system left to the water companies alone.



Conclusions and key messages

Our hypothesis was that information about the social context of consumption can trigger concerns with the fairness of how water is managed as a resource. This concern with fairness can build support for measures to manage water sustainably.

The basis for this notion of fairness was that other people understood the social context of consumption. Co-operation as well as legitimate exceptions from co-operation were important characteristics of what participants defined as a fair system.

This notion of fairness outlined by participants fits with the evidence on common pool resources described in the introduction to this report. Water in the South of England is a common pool resource meaning that it is both scarce and rivalrous. The management of this resource however does not function in line with what we know about successful common property regimes. There is currently no mechanism to penalise those using water excessively. Furthermore, the use of water is sanctioned in different ways. This means that whilst some pay for the amount of water they use, others do not.

Analysis of our research shows that there is an important opportunity for the management of water to function in a way that is seen as

legitimate and fair by the public. Furthermore, the fairness of the system can be a strong driver of support for ensuring water is used sustainably.

Several important lessons emerge from this analysis. These are set out below alongside lessons for policy makers, water companies and communications. This is followed by suggested areas for further research.

Key messages

- 1) **Fairness can be a strong driver of support for measures to reduce water use.** This is however dependent on people understanding the social and environmental context of their water use. This means people understanding the way their consumption might affect others and how the consumption of others might affect them.

This guy Burt (high using character) is using double (the amount of water), so he's causing a lot of shortage in my opinion.

[Male, Bedminster]

- 2) **Current levels of understanding of water use are low.** Participants were often surprised by information provided on the social context of consumption. The concept that there was a limited amount of water available for supply was instrumental in over 60% of participants calling for more widespread awareness of the water situation in the South of England. It was also a strong driver of attitudes to how we pay for water.

Female 1: Why do we pay this way for water? I don't

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know why we think it's so different because it's your usage isn't it?

Male 2: Because we've had it too good for too long. And people think it's an abundance.

Female 1: And they think it's free. You know we've got water but people don't realise what it has to go through to get to our taps.

[Bedminster]

The notion of harm arising from depleting water supply levels was intuitively understood by participants. More surprising was the information about the volumes of water used by different activities. This information provoked strong responses from participants including them expressing ideas of essential and excessive use.

- 3) The desire for clear rules for managing water was a strong driver of fairness concerns amongst participants.** This was what we termed structural fairness. Structural fairness is concerned with the monetary value of, and the ways in which people pay for water. It is essentially a desire for a level playing field in the way water use is measured and paid for. This was seen as important for ensuring co-operation between individuals in managing water sustainably.

Participants felt that metering was an essential part of structural fairness. This was because metering took into account the amount of water people used when determining the level of their bill. This represented an obvious component of a fair water system.

If everybody had a meter it would be the closest to fair it could be.

[Male, Bedminster]

Participants often spontaneously made analogies referring to other social behaviours to help them emphasise the importance of co-operation in measures to reduce water usage. Recycling was one of the most common analogies used.

If I'm going to do it everybody's got to do it. Just being mindful of what you do with water. It's like recycling, you'll do it because everybody's doing it. If someone down the road isn't doing it then you feel a bit disgruntled.

[Female, Swindon]

- 4) Participants felt that appeals to what we call resource fairness will be of limited effectiveness.** Although an understanding of the scarcity of water was a strong driver of fairness amongst participants, over 65% stated that it was not appropriate for communications and messaging. Participants reasoned that information about this will only resonate with those who are already environmentally conscious.

Information about resource fairness was considered more akin to 'context' for other, more hard-hitting information in arguments for reducing water use. For example, when asked to construct resonant arguments for measures to ensure sustainable water use, participants repeatedly selected information about short-term financial impacts and excessive water use.

If there was a water shortage, it would hit business and the economy, the price of food would go up. It's hard hitting and people would listen to it straight away because it's in people's wallets and people care about that. Then we went for brushing your teeth with the tap running as this uses 50 litres of

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water... it highlights the amount of unnecessary water being used...

[Male, Newbury]

So whilst the social context of consumption drives fairness concerns, it is notions of harm and personal use that are seen as more appropriate for communications. This message may appear to contradict participants' expressed desire for increased awareness around water scarcity. It is important though to understand the nuance. Participants were responding to whether they thought this information would be powerful in motivating others to support measures for reduction.

Participants believed that others would only be concerned with economic impacts and shocking information about wasteful water use. This indicates that participants were largely cynical about the capacity for others to understand the elements of the social context of consumption that were less of an immediate or obvious concern. This should not be taken as a lesson to abandon communications relying on this information but rather, emphasises the need to understand how the process of deliberation in the focus groups offers possibilities for how to talk about these issues.

- 5) **Wasteful water use was one of the strongest drivers of pro-social anger in relation to water use.** It was information about how much water is used by leaving the tap running that drew the most pro-social anger about excessive use. This information often caused participants to reflect on their own water usage.

Female 1: I had no idea how much was being used by brushing the teeth (with the tap running), so now I know that uses a lot it's something I can stop doing and I'm aware.

Female 2: Brushing your teeth (with the tap running) is something we could easily change, it's not even a habit.

[Newbury]

This reiterates how powerful notions of essential and excessive water use can be in motivating support for measures to reduce water use. There exists potential for turning taps off to become the water equivalent of what switching lights off when leaving a room represents in energy conservation.

- 6) **When communicating notions of excessive use, participants felt that the language of responsibility is currently more naturally suited to arguments for reducing water use.** This was partly because for fairness to be appropriate, the excessive user had to be aware of the social context of their consumption. Responsibility was deemed less judgemental in this sense.

It is important to note however that responsibility was not seen to 'trump' fairness in any sense. Indeed participants' reasoning showed that responsibility had the same basic meaning as fairness in the context of water use.

When you say irresponsible and responsible then you're talking about impacting on another group of people.

[Male, Newbury]

If anything, the language of responsibility affirms the significance of creating norms around acceptable levels of water use. Participants demonstrated a strong desire to develop social norms around water use. It is to this desire that the language of responsibility is appropriate.

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An interesting observation is that participants themselves frequently used the language of fairness to discuss water use. This was particularly true in reference to metering. This demonstrates the potential for fairness to form a key part of water efficiency messaging campaigns.

- 7) **Participants want government and water companies to work together in efforts to ensure sustainable water use.** Participants do not want to see the burden for ensuring the sustainability of the water supply fall disproportionately upon individuals.

Well if the water companies didn't maintain the infrastructure, we wouldn't have any water to use anyway, so the responsibility lies with them in the first instance. If you like in the second instance it's with the government to control them and make sure they do have the infrastructure in place so that we can be responsible for utilising water properly.

[Male, Crawley]

A large motivating factor was the view that water was an essential public good and that therefore the responsibility was with government to ensure it was managed sustainably. A related element in this type of response was the cynicism about water companies as profit-making bodies. There was a feeling that through stronger government action and leadership, any possible negative 'agendas' from water companies could be reigned in to preserve the public interest.

- 8) **The current situation where some are metered and some are not presents a barrier for future attempts to appeal to fairness.** Some participants expressed a view that setting the right rules of

engagement for water use (clear, fair charging structures) now is crucial for future efforts to manage this precious resource responsibly as a society.

I don't think any of the stuff (ideas for reducing water use) we came up with would work if everybody was unmetered would it? It wouldn't make any difference.

[Female, Newbury]

Analysis of participants' responses highlights the importance of co-operation and the ability for the charging structures to take into account the excessive use of some users. This means that the current split between metered and unmetered households presents a barrier for any appeals to fairness in measures for reducing water use.

The idea of responsibility perhaps best represents how the key messages outlined above interact. Responsibility speaks to the overarching theme of fairness in three distinct ways: responsibility of water use, responsibility for the long-term sustainability of the water supply and a charging structure that facilitates and incentivises responsible water use.

People want to use water responsibly, and they expect others to do so as well. An issue highlighted by the analysis is that participants' responses indicate that there currently exists no shared understanding of what represents responsible water use. Responsibility is also central to the recurring theme of co-operation. Whether it is between individuals or institutional actors, the idea of taking responsibility is central to the fairness of the system. Finally, the structure of how we pay for water and how

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this use is measured needs to be set up to reward responsibility. Responsibility represents the lens through which the concept of fairness explored in the groups is brought to life.

There are important challenges for particular stakeholder groups that emerge from this analysis. Here we set out suggestions for policy makers, water companies as well as looking at the lessons for communications and messaging. These may be important to a range of stakeholders.

Lessons for policy makers

Water is an issue that people expect there to be a strong role for government in setting out a clear direction for the management of the water supply.

As shown in this analysis, in response to information about the social context of consumption, support for metering amongst participants was stronger than perhaps imagined. This suggests that there would be significant support for a universal metering programme throughout the South of England or indeed the UK more widely. This implies some clear political challenges in making the case for a largescale environmental intervention as well as balancing the competing interests of different regions. Even within the South of England itself there is a diversity of the level of water stress. Compulsory universal programmes could provoke regional tensions as the water scarcity issue is of greater severity in particular parts of the South. Could a more gradual, phased-in approach be more suitable to areas under low levels of water stress? A sensible early step could be to make metering compulsory upon change of occupancy.

Participants often made analogies with other utilities to help them express their attitudes towards ensuring sustainable water use. The current state of affordability issues, confusion over tariffs and

growing anger towards energy companies provides an example of the dangers that can arise from not taking action at the right time. Although universal metering comes with spending commitments and political risks for government it is helpful to consider that non-action on metering comes with its own set of risks.

When pressed for where the responsibility should lie for a metering programme, participants felt strongly that government was the most appropriate actor. It is important to state that this was not based on any pro-government sensibility, but from a view that they represented the most legitimate actor for ensuring the sustainability of the water supply.

I'd trust government. Environmental groups are always on a bit of a crusade. Water company – I don't trust anything they say, everyone knows British Gas got record profits but they're still putting prices up. No one trusts them. Of the three, the government is the best of a bad bunch.

[Male, London group 2]

Another reason for the desire for government to set a clear direction was that it showed a willingness to take responsibility. Whilst support for community empowerment and warnings about interference from companies and government are very much in vogue, shouldering the responsibility for ensuring long-term sustainability is actually one of the areas where the public would welcome responsibility being taken on their behalf.

In respect to metering, water companies are currently in a position of supplying an essential public good without a fully-formed understanding of customer demand. Universal (smart) metering¹⁰ would

10. Smart metering is a form of measuring water use that allows for users to receive more detailed information about their own use. Simple meters only allow the information to be relayed to the supplier so they do not fulfil the function of providing users with more information about their use.

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allow them to do so and could lead to much smarter and responsive supply measures in future. The roll-out of smart metering for energy could provide an opportunity to install water meters too and this option should be examined for the economies of scale it could provide.

Lessons for water companies

There was often strong criticism of water companies from certain participants. This usually stemmed from a belief that water companies were complacent about fixing leakage in the water supply system. In addition there was also a perception that any attempt to encourage household water efficiency was a ploy to increase profits. Although these views were strong, they were only expressed by around 35% of participants.

Responses from some participants suggest that it is not all bad news for water companies. One participant expressed a desire to feel 'warmer' to water companies. Another participant believed that water companies were not like other profiteering corporations:

I don't see water companies as business so to speak,
I don't see them as a massive money making thing,
not like other companies

[Male, Newbury]

The analysis shows that there is scope for water companies to improve their relationships with customers by better communicating their efforts in ensuring a sustainable water supply. Communicating the message that water companies and government are working together to safeguard supply would also appeal to a strong desire for institutional co-operation. This could take the form of water companies communicating milestones when investing vast amounts to maintain infrastructure.

Some participants suggested that using water bills to encourage water efficient behaviour as well as to communicate information about the water situation would be welcomed. There are successful examples of this working in Australia, albeit with a much more immediate scarcity issue. The analysis shows that a lot of the above lessons would be easier in a universally metered situation. This would also allow companies to develop a more in-depth understanding of customer demand. Customers would also be assisted in becoming more aware of their own water use, making them potentially more receptive to water company communications.

Lessons for communications

An initial suggestion is that there should be a concerted effort by all water companies, relevant environmental campaigning groups and government departments to create a taboo around taps that are left running for no reason. There is significant potential for this to become the equivalent of what leaving a light on in an empty room is for energy conservation. An overwhelming majority of participants expressed a desire to change their behaviour in regard to information about this.

Another important lesson for communications is that there is a desire for a greater understanding of what essential and excessive use constitutes. All stakeholders involved in water could do more to promote these ideas. Some participants described a notion of 'virtuous' as opposed to 'stupid' water use. These are powerful concepts (although not necessarily appropriate terms) that could assist in motivating behaviour change. In particular, the language of responsibility is ripe for developing norms around efficient water use.

Finally, this research has shown that the social context of consumption can motivate strong fairness concerns around water use. This is especially true of metering and charging tariffs. Some of the key

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messages suggest that participants are cynical that arguments appealing to scarcity would have wide resonance in public engagement campaigns. This report would call on communications around water use to continue to cultivate the idea that water is precious and needs conserving. The deliberative process in this research shows that the social context of water use can be a powerful driver of support for measures to ensure sustainable water use. People can respond to information about limits on the amount of available water by calling for more responsible water behaviour. People do want more information about their own water use in an effort to cultivate norms of responsibility.

The evidence presented in this report shows that there is vast potential for water use to be viewed through the lens of fairness. Pro-social instincts embedded in ideas of fairness and responsibility can be powerful drivers for support for reducing water use. In order to harness these drivers, there are big challenges ahead for both government and water companies to ensure that the rules of the game are fair. If this can be done, people will be willing to play their part in ensuring water is managed sustainably.

Further research

If metering is indeed key for fairness, the consequences of rolling out universal programmes need to be explored and tested for fairness impacts. This project was explicitly regional in its focus. What does the support for metering in the South of England mean for metering in other parts of the country? Would people in other parts of the UK be happy to be part of a universal metering programme or is this best done on a region by region basis? Does the roll-out of smart meters for energy across the UK provide an important window of opportunity to look at water metering as well?

The characteristics of fairness that participants explored give an indication of what the basis for fair and acceptable charging structures could look like. This research provides strong hints for the kinds of information key to making the appeal to fairness in designing such charging tariffs. Further research could allow for a greater understanding of how issues to do with measurement, information about usage and the gradient of price increases for volumes of water can ensure the acceptability of tariff design. Furthermore, how important is choice in tariffs? This research has shown that co-operation and procedural equality is central to fairness. Does this filter down to the level of tariff design?

The study of social tariffs in water is also an area where further research could be important. How much are people willing to subsidise low-income water users? This research suggests that measurement and the perceived responsibility of the water use by those with a low ability to pay are essential to the legitimacy of social tariffs. Further research into these issues as well as on the perceived responsibility of government and water companies in designing social tariffs could be fruitful.



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Appendix i

The Defra segmentation profiles

This Appendix illustrates some of the main characteristics of the seven segments of Defra's segmentation framework. The text has been extracted from A Framework for Pro-environmental Behaviours (Defra, 2008a).

Group 1: 'Positive Greens' (18 per cent of the population)

- This group assess themselves as acting in more environmentally friendly ways than any other group does. Additionally, they are the most likely group to want to live a more environmentally friendly life than they currently do.
- They are the most likely by far to be in AB socio-economic groups (SEGs) and have the highest levels with household incomes of £40,000 and over per annum. They are the most likely to have a degree, and to read The Guardian, The Independent or The Times.

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Their profile is biased towards middle age (41–64), and owner-occupancy.

Group 2: 'Waste Watchers' (12 per cent of the population)

- This group are doing more than any other (except group 1) to help the environment. However, this behaviour is driven by an urge to avoid waste rather than seeking to reduce their environmental impact.
- There is a middle age and older age bias. One third are aged 65 and over (nearly twice as likely as average), while less than a quarter are 40 and under (half as likely as average). One third are retired, and many are on low incomes (two fifths on £20,000 per annum or less). Over half own their homes outright and they are the most likely to read the Daily Mail or The Daily Telegraph.

Group 3: 'Concerned Consumers' (14 per cent of the population)

- This group holds broadly pro-environmental beliefs, although with less conviction than groups 1 and 2. Members of this group are particularly sympathetic to the concept of 'climate change', acknowledging their personal impact and seeing taking action as important. Conversely, they show the strongest rejection of any group of the idea that we are reaching our limits to growth and they also doubt that an ecological crisis is imminent.
- One third are aged 30–40, and there are the lowest levels aged 65 and over. There is a slight bias towards ABC1 SEG. One third have household incomes of £40,000 and above per annum and, notably,

this includes the highest level of all groups with household incomes of £60,000 and above (nearly one fifth of the group). They are the most likely to be owner-occupiers with a mortgage, and the most likely to have dependent children (along with group 5). They are the second most likely to have a degree.

Group 4: 'Sideline Supporters' (14 per cent of the population)

- This group have a generally pro-environmental world view, although these beliefs are held relatively weakly across the board. Members of this group are second only to group 1 in anticipating an imminent crisis; however, they are more likely to think that humans (possibly other people) will find the solution.
- Members of this group span all ages, although under 30s are over-represented. They have average levels of household income, but with a bias towards C2DE SEGs. They are more likely than average to read the Daily Mail or The Sun, and fewer than average are educated to degree level.

Group 5: 'Cautious Participants' (14 per cent of the population)

- This group's environmental world view is close to the average for the population: members of this group tend to agree there is a pressing crisis, and that there are limits to growth. They are pessimistic about our ability to tackle climate change, but recognise its impacts.
- This group have a younger than average age profile, with one quarter aged 30 and under, and nearly as few aged 65 and over as group 3. Equal with group 3, members of this group are the most

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likely to have dependent children; however, they are slightly more likely to be renting than group 3. They are the third most likely to have a degree, after groups 1 and 3.

Group 6: 'Stalled Starters' (10 per cent of the population)

- This group present somewhat confused environmental views. Mostly the views are strongly negative: members of this group have the highest level saying climate change is too far in the future to worry about and, with group 7, the highest levels believing that the environmental crisis has been exaggerated (about half). However, they are also the most likely (with group 1) to agree that there are limits to growth and that humans are damaging nature; if the group genuinely hold these views, they appear not to want to act on them.
- They have the lowest social profile of any group (nearly half are DE SEGs), and the lowest levels of income (nearly half are on less than £20,000). They tend to be younger or older, with middle-aged people under-represented, and the group includes more BMEs than average. They have the lowest levels of qualifications of any group (half have none), and are the most likely not to be working. They are the most likely group to read *The Sun*, the *Daily Mirror* and the *News of the World*.

Group 7: 'Honestly Disengaged' (18 per cent of the population)

- This group's ecological world view is predominantly shaped by a lack of interest and concern. However, members of this group are also sceptical about the current environmental threat (half think it has been exaggerated). They are nearly as likely as group 6 to deny that their behaviour contributes to climate change and more likely than most to think the problem will be solved without people needing to make changes to their lifestyles.

- While the group spans all ages, under 30s are over-represented (comprising more than a quarter). In terms of social grade, members of this group are slightly more C12DE SEGs, with ABs underrepresented; income levels are also slightly below average. Similarly, slightly fewer than average of this group have degrees. They are more likely than average to be working full-time, to be renting, and to read The Sun, the News of the World and the Daily Star.

Appendix ii

Case study of participants' views

This appendix illustrates some of the views of particular participants which add depth to the analysis in the main body of the report. Their names have been changed to preserve anonymity.

Angie

DEFRA segment: Positive Green

Angie was representative of the manner in which participants were concerned with both resource and structural fairness. At the start of the groups and in line with her DEFRA segmentation profile, Angie displayed a passionate view about resource fairness.

I think it's about being socially conscious as well...
how much do we actually think about our environ-

ment and our society when we do things in our personal space?

Angie was also strong in her condemnation of what she saw as non-essential luxury behaviours.

For one person, it seems excessive. A hot tub, is that necessary?

Towards the end of the group, Angie clearly expressed her concern with structural fairness.

I think it's a bit unfair that people like William, who are making concessions and giving up certain things to try and reduce it, being discounted out by people like Jeff who don't care

Jessy

DEFRA segment: Stalled Starter

The significance of looking at Jessy's views throughout the groups is that she stated that as a keen gardener, water was central to her lifestyle. Early on in the group, she provides this as a reason for not wanting to be on a water meter.

...I'm a keen gardener maybe I'm a bit blinkered about it...I don't think I'm ready for a water meter. I think it'll stay where I am now.

When responding to the information about water scarcity, Jessy makes the connection to the implications for her own lifestyle.

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It concerns me that something that I'm passionate about I'd actually have to give up...it would be the end of my gardening.

As the group neared a close, Jessy concedes that whilst metering may not benefit her financially, she would accept it because it is a fairer way to pay for water.

I suppose it's a fairer way, a meter is a fairer way to do the bill. Everyone should be on a meter...I'm unmetered, and I would accept it.

Tim

DEFRA segment: Sideline Supporter

Tim was one of the participants who displayed the most resistance to the notion of scarcity. He found it difficult to engage with the material in the groups beyond a criticism of water companies. He felt that all water scarcity in England was the result of water company actions.

Basically we're paying a lot of money for other peoples' failings. Their [water companies] lack of ability to maintain their water ways, and we pay a fortune, and that's why there are so many shortages, because, there's water wasted through an inability to maintain their supply systems.

As the groups progressed, Tim did not change his stance in regard to blaming water companies.

I believe we're losing millions of gallons a day of sustainable water because...they're reaping the benefits rather than pumping the money back into busi-

nesses...instead of taking 10p in the £1 profit for their shareholders.

Tim did however demonstrate strong concerns with fairness, especially in regards to co-operation and structural fairness. As with most participants, the support for structural fairness was expressed through support for metering. Tim highlighted the importance of metering being universal.

If you're going to do it (metering) it's all for one and one for all.

Robert

DEFRA segment: Honestly Disengaged

Similarly to Tim, Robert began the group by expressing strong opposition to water companies and blamed them for the majority of the problems with water supply.

They've [water companies] got so many leaks...they lose, I don't know how many thousands of gallons a day. Every so often they come and repair it and three weeks later...it's back to the norm.

Despite such strong condemnation of water companies, and again, similarly to Tim, Robert was one of the strongest advocates of structural fairness. This was illustrated in the strength of his support for metering. Again, it was important to Robert that metering be universal.

...Meters are the only way to go forward and getting one into every home so it is fair.

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Water Use in Southern England What do the public think is fair?

Natan Doron

This research explores people's sense of fairness with respect to household water use in order to identify ways of building public support for actions to preserve water supply.

This report is part of the Fabian Society's Environment and Citizenship programme. The programme looks at environmental policy challenges and the role of citizenship: both 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.

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