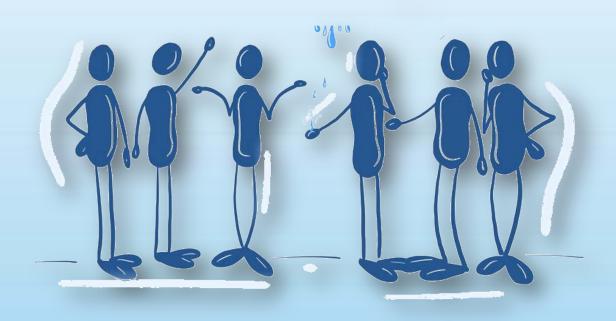




## Water saving:

Helping customers to see the bigger picture

**APPENDICES** 





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#### 1. Desk research summary

#### 1.1 Approach

- Call for information against study objectives:
  - Understand where consumers are now, in relation to water use, water saving, and issues of scarcity and resilience;
  - Explore participants' responses to information about water resources and resilience;
  - Identify motivating messages around water use in the context of resilience, and how best to convey them.
  - Within these three themes, we are particularly interested in how responses vary between different segments and subgroups of the population.
- Note: Review undertaken in limited timeframe, and primarily as internal resource to inform development of deliberative research activity (sample design; stimulus material)
- 37 Sources gathered
- All 37 'mined' for relevant evidence and data
- Against themes:
  - Audiences (variations by audience; segmentations)
  - Behaviours (Current; potential; factors & influences)
  - Perceptions (Awareness; knowledge; attitudes; etc.)
  - Communications (Evidence re channels, messages, etc.; Principles; etc.)
  - Resilience (How understood by public; Relevant messaging; etc.)
- Detailed source material, and potential resources for stimulus, are included among the Appendices as follows:
  - Typologies and Segmentations
  - Uptake of water saving behaviours
  - Drivers, motivations and barriers for water behaviours
  - Communications Channels
  - Potential Stimulus Materials
  - References

#### 1.2 Summary of Findings

#### Audiences

- In terms of the key variables for discriminating between audience subgroups, which variables to choose depend on what is meant by engagement. For instance, levels of uptake are very different for 'taking a shower instead of a bath' (78% do so) as opposed to taking a short shower' (50% do so) [see e.g. MORI for the Welsh Government 2011]. Meanwhile the determinants of each behaviour also vary widely.
- Despite these variations in levels of participation and perceptions in relation to watersaving, the following sociodemographic and attitudinal variables can be suggested as potentially discriminating between subgroups – and hence providing a good basis for designing the sample for primary research.
  - Age
  - Gender
  - SFG
  - Highest educational qualification (none; some; degree or above)
  - Attitudes to waste (e.g. 'waste not want not is a guiding principle in my life')
  - Attitudes to sustainability (e.g. 'I would like to do more to live a sustainable lifestyle') ...these appear to be more strongly predictive than questions about



- belief in climate change (though these do also show variations on some attitudes/behaviours).
- Attitudes to water ownership (e.g. water is a shared resource vs. water is a service which I buy vs. don't tend to think about it)
- Note that levels of water use (high/medium/low) also appear to impact on responses, as do property type / garden size, and ownership of domestic appliances (especially dishwashers).
- Recent work by Artesia has found that water consumption (volumes/patterns) could be predicted by time of use data – hence their three segments of Early Risers, Transitionals, and Late Risers.

#### **Behaviours**

- The use of water by people in everyday life and especially in the home, tends to be considered from a straightforward 'behaviour' perspective: people decide to turn on or off taps, flush or don't flush toilets, and take showers of varying lengths. However, this perspective is critiqued by sociologists who point out that water use is more accurately understood as an habitual practice an 'incidental product of everyday life' (Icaro Consulting, 2013:1). From this perspective, people wash (themselves or their clothes or dishes), go to the toilet, garden, etc. all of which happen to involve the use of water. Water use is not therefore something that people tend to consciously think about they carry out daily practices that happen to use water.
- A number of sources present evidence that a significant proportion of members of the
  public claim to make a conscious effort to reduce their water use in the home. The
  behaviours featured tend to combine water saving behaviours, water using practices,
  and the installation of water efficient appliances or adaptations.
- Behaviours typically featured in the evidence include the following listed approximately in decreasing proportions of people who report undertaking them (ie. from most to least popular):
  - Turning tap off when brushing teeth
  - Washing up in a bowl not with the tap running
  - Only using the washing machine when it is full
  - Showers not baths
  - Re-using water (e.g. washing up water)
  - Shorter showers
  - Fitting a low flow shower head
  - Dual flush toilets
  - Fitting Hippos or bricks in the cistern

#### **Perceptions**

- People recognise water's central importance to our lives and ways in which its importance is evident in so many aspects of life – including historically, geographically, physically and culturally. Following on from this, water is often considered a 'right', especially where (as in the UK) people pay for it, and perceive there is plenty of it about.
- Despite this centrality and importance, there is evidence of a significant disconnect between people and the natural and human systems that supply and dispose of the water they use. The water cycle and water system are often largely invisible to most people, and there are high levels of ignorance about them and even about how much water people actually use. There are also low levels of knowledge of the need to conserve water, as well as that water use and energy use are linked.
- Water availability is not seen as a major concern by most people living in the UK. In 2016, nearly four fifths (79%) of people claimed they had not seen anything suggesting



the reliability of their water supply might be adversely affected in future; this was up from 69% the previous year (2015 – see BMG 2016).

#### Communications

- Communications about water issues need to be seen in the broader context of the complex water system, and the multiple factors that influence behaviour. Information and communications are however likely to be helpful, or even necessary, as part of a mix of multiple interventions.
- There is evidence of need for more information / knowledge building around fundamental aspects of water and water resilience.
  - awareness of the services water companies provide, including sewerage;
  - fundamental information regarding the water and wastewater systems;
  - specific information about how much water people use in their daily activities;
  - practical guidance on how to save water in the home.
- Importantly, studies show that while people need basic factual information, once they have this they quickly move on to practical questions about their own specific water consumption, and what they can do to reduce this.
- A number of sources include evidence or guidance about communicating on flood and drought related issues. These stress that strategic approaches are required in order to:
  - tackle denial and anxiety;
  - connect with people on an emotional and social, not just rational and individual, level:
  - co-construct new ways of talking about water security, in order to increase engagement.

#### Resilience

- "There has been much debate over the definition, implementation, and evaluation of resilience" (Butler et al 2017). The authors propose the following definitions:
  - Reliability: "the degree to which the system minimises level of service failure frequency over its design life when subject to standard loading"; concerned with attempts to design fail-safe performance.
  - Resilience: "the degree to which the system minimises level of service failure magnitude and duration over its design life when subject to exceptional conditions"; concerned with design to overcome failure and ensure the system is safe to fail.
  - Sustainability: "the degree to which the system maintains levels of service in the long-term whilst maximising social, economic and environmental goals"; relating to the level of service provision and social, environmental and economic consequences in the long term, encompassing all levels of performance, both above and below the required level of service.
- Note that resilience is often thought of at a system scale, dealing with issues such as the
  planning system, design of developments, catchment-scale flood management and
  different stakeholders responsible for different parts of the system. The role of the
  individual is often overlooked. Where they do feature, this is either in terms of
  household-level behaviours (e.g. water saving, or water efficiency measures) or
  community-level preparedness (e.g. in response to flood or drought).
- If resilience is to be a feature of public communications, new ways of explaining it to, and exploring it with, the general public will be required. Again, a process of co-production is advocated by a number of the sources under review. One suggestion is to start from what people know e.g. how disruption to water supply might affect them and then progress to a (facilitated) consideration of the system and potential threats.



### 2. Sample breakdown

### Achieved sample

	London	York	Neath	Norwich
Total	22	25	22	24
Gender				
Male	11	12	14	11
Female	11	13	8	13
Age group				
16-34	6	8	5	5
35-54	9	8	7	10
55-64	4	4	5	5
65+	3	5	5	4
Ethnic background				
BME Background	9	6	0	0
Working status				
Employed	13	15	13	15
Unemployed/Not working /FT	6	6	4	5
student				
Retired	3	4	5	4
Social grade				
AB	5	7	3	6
C1C2	12	12	12	12
DE	5	6	7	6
Lifestyle				
No dependent children	10	18	15	10
Dependent children in	12	7	7	14
household				
Metered				
Metered	7	10	8	12
Unmetered	15	15	14	12
Bill Payers				
	22	22	22	24
Education				
No qualifications	3	5	5	6
Qualifications but no degree	9	15	12	11
Degree or above	10	5	5	7



#### 3. Recruitment materials





### CCWater Resilience Recruitment Questionnaire

Good morning/afternoon/evening, my name is . . . . . working for Community Research, a market research company.

Community Research is carrying out a workshop at [venue] on [date]. The workshop will run from 10am until 4pm and will

The research is being conducted on behalf of of CC Water, the consumer body for the water industry. Its aim is to represent the interests of water consumers, and this research will help CC Water to better understand the views of water consumers on issues which affect people like you. Would you be willing to take part?

To say thank you for your time and cover any expenses incurred we would like to offer £75 for attending the workshop. (RECRUITER NOTE: THE INCENTIVE OFFERED REPRESENTS COMPENSATION FOR THEIR TIME, TRAVEL EXPENSES AND ANY CHILDCARE).

We are looking for particular groups of people; therefore I would like to ask you some questions about yourself. All information collected will be anonymised.



#### ASK ALL

#### Q1 Would you be interested in taking part in this workshop?

Yes	1	CONTINUE
No	2	CLOSE

#### ASK ALL

## Q2 Can I ask if you are available on the date and time of the event (INSERT DATE AS APPROPRIATE)?

Yes	1	CONTINUE
No	2	CLOSE

#### ASK ALL

Q3 SHOWCARD A Do you or any members of your immediate family or close friends work in any of the following areas, either in a paid or unpaid capacity? Have you ever worked in any of these areas?

Journalism/the media	1	
Market research	2	
Elected politician (e.g. local councillor)	3	
The water industry (e.g. water companies such as	4	
Thames Water, Southern Water, Welsh Water, Dee		
Valley Water Anglian Water, Yorkshire Water, etc and		THANK AND
industry regulators and stakeholders such as Ofwat,		CLOSE
Environment Agency, Department for Food and Rural		OLOGE
Affairs (Defra); WaterWise)*		
Environmental campaigning organisations (e.g.	6	
Greenpeace, Green Alliance, WRAP)		
Consumer organisations (e.g. Which? or Citizens'	7	
Advice)		
No, none of these	8	
Don't know	9-	THANK AND
		CLOSE

<sup>\*</sup>Please see full list for further details

#### **ASK ALL**

### Q4 Have you participated in a group discussion for an opinion or market research company in the last 6 months?

Yes	1	THANK AND CLOSE
No	2	CONTINUE

#### ASK ALL

## Q5 Are you mainly or jointly responsible paying the water bill for your household?

Yes	1	DECDUIT TO OHOTA
No	2	RECRUIT TO QUOTA

#### ASK ALL

#### Q6a Does your household have a water meter?

Yes	1	DECDUIT TO OUGTA
No	2	RECRUIT TO QUOTA

#### IF YES ASK:

#### Q6b Which of these best describes the reason that you have a water meter?

It was already in my home	1	
when I moved in		
I / we asked to have it	2	
installed		
My water company installed it	3	RECRUIT A MIX
(although I didn't ask for it)		RECRUIT A WITA
Other (PLEASE SPECIFY)	4	

#### ALL

#### Q7 Code sex (do not ask)

Male	1	RECRUIT TO QUOTA
Female	2	RECRUIT TO QUOTA

#### ASK ALL

#### Q8 How old are you?

16-34	1	
35-54	2	RECRUIT TO QUOTA
55-64	3	RECRUIT TO QUOTA
65+	4	

#### Q9 To which one of the following groups do you consider that you belong?

INTERVIEWER: PLEASE BE SURE TO WRITE IN ANY 'OTHER' INFORMATION FULLY AND CLEARLY. SHOWCARD B SINGLE CODE ONLY

White British	1	
White Irish	2	
Any other White background	3	
White and Black Caribbean	4	
White and Black African	5	
White and Asian	6	
Any other mixed background	7	
Indian	8	RECRUIT TO
Pakistani	9	QUOTA
Bangladeshi	10	
Any other Asian background	11	
Caribbean	12	
African	13	
Any other black background	14	
Chinese	15	
Any other background	16	

#### **ASK ALL**

## Q10 Which of the following best describes your household? SHOWCARD C SINGLE CODE ONLY

Married /cohabiting with dependent children	1		
Married/cohabiting with no dependent children or no children	2	-	
Multi-generational household	3		
Lone parent with dependent children	4	RECRUIT TO	
Living alone	5	QUOTA	
Unrelated adults	6		
Not stated	7		

#### ASK ALL

#### Q11 Which of these best describes your current situation?

READ OUT. SINGLE CODE ONLY

Full time employed	1	
Part time employed	2	
Unemployed	3	RECRUIT TO
Retired	4	QUOTA
Student	5	
Other	6	

#### Q12 What is the occupation of Chief Income Earner in your household?

Position/rank /grade Industry/type of company Quals/degree /apprentices hip Number of staff responsible for

#### CODE SOCIAL GRADE FROM; ABOVE DO NOT ASK

AB	1	
C1	2	RECRUIT TO QUOTA
C2	3	RECRUIT TO QUOTA
DE	4	

#### ASK ALL

#### Q13 What is the highest level of education you have completed?

READ OUT. SINGLE CODE ONLY

Less than GCSEs / O-levels or equivalent	1	
GCSEs/O-levels or equivalent	2	
A-levels or equivalent	3	RECRUIT
Undergraduate university degree, vocational qualification	4	TO QUOTA
or equivalent professional qualification		10 0001A
Master's degree, PhD, MBA or equivalent professional	5	
qualification		

#### ASK ALL

# Q14 SHOWCARD D. On a scale of 0-10, where 0 is don't agree at all and 10 is agree completely how far do you agree or disagree with the following statements:

"I don't pay much attention to how much water I use at home."		
"I try my best to live a sustainable / environmentally friendly lifestyle"		
"'Waste not want not' is a guiding principle in my life."		RECORD
"Water is precious and we all have a responsibility to conserve it"		SCORE OUT OF 10
"In this country there's plenty of water to go around, so I don't worry much about how much I use."		
"In the future hosepipe bans or other restrictions on how		
we use water are going to happen more often where I live."		

#### Q15 **Do you speak Welsh in your everyday life?**

YES	1	RECORD BUT NOT TO
NO	2	QUOTA

ASK IF YES AT Q20

#### Q16 Would you be happy to participate in a discussion group in English?

YES	1	RECORD
NO	2	RESOND

Q17 Thank you for agreeing to take part in this workshop.

Please be assured that your contact details will be stored in accordance with our Information Security guidelines and will not be passed onto anyone outside of the company.

Please confirm you are happy with this.

YES	1	CONTINUE
NO	2	CLOSE

Q18 Finally, then, I just need to take details of your name, email, address and telephone number:

### RECRUITER NOTE: RECORD <u>ALL</u> AVAILABLE INFORMATION IN CAPITAL LETTERS – NB

NAME:		
ADDRESS:		
POSTCODE:		
EMAIL		
TEL NO:	Daytime: Evening: Mobile:	
	Evening:	
	Mobile:	

#### **READ OUT**

Just to confirm, the workshop is on <u>DATE</u>. At <u>venue</u>. <u>Catering</u> will be provided. Please put this date in your diary and get in contact with your recruiter if you can't attend for any reason so we can find someone to replace you.

INTERVIEWER'S DECLARATION:
THIS IS A TRUE RECORD OF AN INTERVIEW WHICH HAS BEEN CONDUCTED WITH A RESPONDENT WHO IS NOT A RELATIVE OR FRIEND OF MINE
INTERVIEWER'S SIGNATURE DATE



## Draft Main Workshops Recruitment Specification: CC Water Customer Communication: Water Supplies & Resilience

#### Location and timing

The events will be held in the following locations, at the following times.

Date (day, date & month)	Location	Venue:
2nd May 2017 Room: 8am-5pm Event: 10.00am-4pm	York	Clements Hall Nunthorpe Road York YO23 1BW 01904 466086
4 <sup>th</sup> May 2017 Room: 8am-5pm Event: 10.00am-4pm	London	Friends House, 173 Euston Road. London, NW1 2BJ. 020 7663 1100
9 <sup>th</sup> May 2017 Room: 8am-5pm Event: 10.00am-4pm	Neath, Wales	The Bluebell Hotel Neath The Parade, Neath, SA11 1RA 01639 644000
11 <sup>th</sup> May Room: 8am-5pm Event: 10.00am-4pm	Norwich	Number 47 Norwich 47 St Giles Street Norwich NR2 1JR 07436 799008

#### Screening

#### Screen out:

- People who work in or used to work in (or have family working in) the water industry (this includes water companies such as Thames Water, Southern Water, Welsh Water, Dee Valley Water Anglian Water, Yorkshire Water, etc and industry regulators and stakeholders such as Ofwat, Environment Agency, Department for Food and Rural Affairs (Defra); WaterWise).
- People who work for (or have family working for) or are members of environmental campaigning organisations.
- People who have taken part in market research within the last 6 months.

### Demographic specification

Total		25 Participants		
Gender				
Male		12.	/13	
Female		12.	/13	
Age group				
16—34		8	8	
35-54		{	8	
55-64		4.	/5	
65+		4.	/5	
Ethnic background				
	York	London	Wales	Norwich
BME Background	At least 4	At least 8	At least 2	At least 4
Working status				
Employed	14			
Unemployed/Not working /FT student	6/7			
Retired	4/5			
Social grade				
AB		6.	/7	
C1C2		1	2	
DE		6.	/7	
Lifestyle				
No dependent children		At le	ast 8	
Dependent children in household	At least 8			
Metered				
Metered	10 (mix of reasons for fitting)			
Unmetered	15			
Bill Payers				
			or fully respo m of 4 who a	

Education	Soft quotas – to be monitored
No qualifications	5-8
	(nationally around 23%, but will be lower in
	London)
Qualifications but no degree	10-15
	(nationally = around 50%)
Degree or above	6-8
	(nationally around 27%, will be higher in
	London)

#### Attitudinal and behaviour specification:

No quotas but we will be looking to choose sub-groups by answers to these questions so all need to be asked these:

## On a scale of 0-10, where 0 is don't agree at all and 10 is agree completely how far do you agree or disagree with the following statements:

- "I don't pay much attention to how much water I use at home."
- "I try my best to live a sustainable / environmentally friendly lifestyle"
- "'Waste not want not' is a guiding principle in my life."
- "Water is precious and we all have a responsibility to conserve it"
- "In this country there's plenty of water to go around, so I don't worry much about how much I use."
- "In the future, hosepipe bans or other restrictions on how we use water are going to happen more often where I live."

### 4. Agenda and stimulus





Outline Agenda: CC Water: Water supplies and resilience: FINAL

Timing	Content	Requirements
15 mins	Registration & refreshments	Photo & filming
(9.30-		permission forms
9.45am)	DI ENIADY INTRODUCTION	Video from CCW
10 mins	PLENARY INTRODUCTION	Video from CCW –
(9.45-	Welcome and introduction     Housekeening	introduction from Mike
9.55am)	<ul> <li>Housekeeping</li> <li>Lead facilitator introduces CCW video setting out purpose of the day &amp; importance of</li> </ul>	Keil, Head of CCWater Policy and Research
	feedback received	Folicy and Research
	Lead facilitator explains	
	Who is in the room	
	Role of table facilitators	
	Role of observers	
	Ground rules	
	Hand over to tables	
5 mins	GROUP INTRODUCTIONS	Nothing
(9.55-	Name, hobbies, what would they be doing if there weren't here today	
10.00am)		
	GROUP SESSION	
-	Session 1: Understanding where consumers are now	
30 mins	Session 1.1 Responses to pro environmental messages	Messages to test
(10.00am-	Show a mix of pro environmental messages (including some water messages but also	
10.30am)	including energy, recycling etc.) Give them a sheet each with messages.	
	Before group discussions, capture some individual feedback about the messages by	Green and red pens for
	before group discussions, capture some individual reedback about the messages by	orcen and red pens for

Timing	Content	Requirements
	asking them to annotate the messages individually. Green pen to highlight interesting / appealing / motivating information. Red pen to highlight off-putting / unnecessary / not credible information.	responses
	<ul> <li>Then move on to Group discussion:</li> <li>Which, if any of the messages grabbed your attention? Why?</li> <li>For those not mentioned as attention-grabbing: Why didn't this one grab your attention?</li> <li>Which of these messages do you find most motivating to act? In what way? Which are least interesting/motivating and why? (Moderator to note how much this is to do with the subject matter – is it something that people already 'believe in' or are engaged with, and how much is to do with it being a persuasive message)</li> <li>Which, if any, might get you to do something different?</li> </ul>	
	<ul> <li>Looking at water related messages in particular:</li> <li>Which of these messages fit with how you think/feel about water? And which don't? Why?</li> <li>Why do you think this message is asking people to save or use water carefully?</li> <li>What, if anything, are these messages saying about water supplies?</li> <li>What, if anything, are these messages saying about water use?</li> </ul>	
	<ul><li>Understanding of resilience</li><li>What does the word 'resilience' mean to you?</li></ul>	
	When discussed facilitator explains: We asked you that because we are going to be talking about something water companies refer to as 'resilience' it really just means "making sure there is enough water to go around for society, the environment and the economy in the longer term future." It's about water companies planning for and being able to recover from a range of things that could affect your water supply over coming years.	

Timing	Content	Requirements
	<ul> <li>Give everyone a folder. Explain that this is for them to keep note of anything they hear that influences, interests or surprises them. What they record will be used by them in an exercise at the end of the day. This will act as a useful reminder as they will hear a lot of information during the day. We will also collect in folders at the end of the day but there is no need to write things for us – just jot down whatever is useful for them.</li> <li>Encourage them to make notes on the sheet of messages and put this in their folder.</li> <li>VISUALISER TO RECORD: MESSAGES WHICH RESONATE WITH PARTICIPANTS IDEALLY IN THEMES (E.G. SAVING MONEY, HELPING WILDLIFE ETC.) IF POSSIBLE</li> </ul>	
10 mins	Session 1.2. Attitudes towards the environment/pro-environmental	Nothing
(10.30-	behaviours [ONLY IF TIME / IF NOT FULLY COVERED IN PREVIOUS SECTION]	
10.40 am)	Explain that before we start talking about water, we would like to hear their thoughts	
	about some wider issues. During the discussion, be careful not to give the impression that they should be saving energy etc.	
	<ul> <li>As part of your daily routine, do you</li> </ul>	
	• Recycle? (What?)	
	Save energy? (How?)	
	<ul><li>Use their car less?</li></ul>	
	Anything else they do with the environment in mind?	
	Emphasise the importance of honesty – tell us what you really do, not what	
	you think you should do.	
	If they do take actions in these areas:  Why do you do these things? PROMPT hebit, soving manay reducing waste, locking.	
	<ul> <li>Why do you do these things? PROMPT habit, saving money, reducing waste, looking after the environment, think it's the 'right thing' to do, social/peer pressure.</li> </ul>	
	<ul> <li>Why do you do some things and not others?</li> </ul>	
	<ul> <li>If they don't take actions in these areas: why is this?</li> </ul>	
	What messages do you remember hearing about things like recycling, saving energy	
	etc? What sort of messages stand out and why?	
	<ul> <li>Have you ever changed what you do because of an particular advert, message or some information you saw or something you heard either in the media or from</li> </ul>	

Timing	Content	Requirements
	someone you know? EXPLORE in depth: what was it that made you change your behaviour? What did you do differently – are you still doing it? PROMPT around content / format / 'new-ness' of message etc.	
	VISUALISER TO RECORD: REASONS FOR TAKING (AND NOT TAKING) THESE ACTIONS	
15 mins	Session 1.3 Household water consumption	Nothing
(10.40-	Again during this discussion, be careful not to give the impression that they should be	-
11.55am)	saving water.	
	<ul> <li>How do you feel about the water you use in your day-to-day activities? To what extent is your water use something you think about or notice? Why / why not? Do you have a rough idea of how much you or your household uses every day? <ul> <li>What sorts of things would prompt you to think about or notice the water you use?</li> </ul> </li> <li>As part of your daily routine, do you save water or use water carefully? What do you do? What else do you know about but not do? <ul> <li>What else are you / aren't you willing to do to use less water? Why?</li> </ul> </li> <li>If they don't currently take any water saving measures or only do a few: Why is this?</li> <li>If they do take water-saving measures or use water carefully: <ul> <li>Why do you do these things?</li> <li>What prompted you to start taking this action to save water? Is it something you have always done? When did you start doing these things and what triggered you to start? PROMPT bills, water meters, hosepipe ban, info they saw/heard somewhere (e.g. advert or newspaper), other people.</li> </ul> </li> <li>Do you see saving water as similar/different to other behaviours discussed in previous section? E.g. why turn off lights, but don't turn off taps while brushing teeth? <ul> <li>How does your water bill affect your water use (whether metered or unmetered)? Why?</li> <li>Have you ever thought that saving hot water also saves energy and reduces your energy bills? Does that affect how you see your water use at all?</li> </ul> </li> <li>VISUALISER TO RECORD: (1) REASONS FOR TAKING (AND NOT TAKING) THESE</li> </ul>	
	ACTIONS, (2) HOW SAVING WATER COMPARES TO OTHER ENVIRONMENTAL ACTIONS	
25 mins	Session 1.4 Thoughts about water supplies/resilience now and in the future	Nothing

Timing	Content	Requirements
(10.55-	Water supply now	
11.20am)	Do you think of water (supplied by your water company) as plentiful or in short supply	
	in your area?	
	What about in other parts of the UK or the UK as a whole?	
	What makes you think that? PROMPT flooding, hosepipe bans, things they've seen/heard in the media.	
	Water supply in the future	
	<ul> <li>How confident are you that in the longer term, your water supply will be available to use without restriction, that is, not subject to hosepipe bans or other restrictions on use?</li> </ul>	
	<ul> <li>What impact do you think your use of water has on the environment and on the water system more generally?</li> </ul>	
	<ul> <li>Do you expect there will be more or less water available for your household to use in 5 years? What about in 25 years?</li> </ul>	
	How certain do you feel about this?  Miles to the first test of the first test	
	<ul> <li>What do you think might affect the amount of water available?</li> <li>FLIPCHART EXERCISE –</li> </ul>	
	Using post-it notes the group is encouraged to populate a flipchart with 2 subheadings.	
	<ul> <li>Reduces the amount of water available;</li> <li>Increases the amount of water available</li> </ul>	
	They are asked: What events, actions or factors might, in the future, reduce or	
	increase the amount of water available? Facilitator encourages wide thinking – any kind	
	of events; actions by water companies or others; actions by the population; decisions	
	made by government/regulatorsanything at all.	
	Impacts of water shortages	
	<ul> <li>If there is less water available in future, to what extent would you expect it to affect you?</li> </ul>	
	How do you think this might affect you/your day-to-day activities/the way you use	

Timing	Content	Requirements
	water/water charges/have to be metered? PROMPT around essential / non-essential use e.g. sprinklers, paddling pools, jet washing, hot tubs, power showers etc.  • Who else or what else might be affected? How might they be affected? How much does this matter to you? PROMPT  • Other people where they live and in other parts of the UK  • The next generation  • Businesses that use water  • Nature  • Water bills/meters  Explain that we will be coming back later to talk about how water supplies might change in the future and what impacts this might have.  VISUALISER TO RECORD: EXPECTATIONS ABOUT FUTURE WATER SUPPLY & IMPACTS OF WATER SHORTAGES	
	GROUP SESSION Session 2: Exploring participants' responses to information about resilience  Follow the same process in sessions 2.1 to 2.5: engage/prepare for info by asking a couple of questions and discussing them as a group; impart key info; discuss responses to the info as a group; individually record what influenced their views about resilience.	
	<ul> <li>THROUGHOUT SECTION 2 VISUALISER TO RECORD: WHAT INFO ELICITS STRONG REACTIONS OF ANY SORT, AND WHAT THESE REACTIONS ARE</li> </ul>	Folders and pens
45 mins (11.20- 12.05pm)	<ul> <li>Session 2.1: Potential impacts of changes to water supply Engage/prepare for info</li> <li>Cloud to tap drawing exercise</li> <li>Groups draw their understanding of where water comes from and what happens to it before it comes out of the tap.</li> <li>Show animation</li> <li>Explain where water comes from, with particular emphasis on the water company's role.</li> </ul>	Stimulus 2.1.1 Cloud to tap exercise instructions  Stimulus 2.1.2 – Water cycle animation storyboard

Timing	Content	Requirements
	Impacts of changes to water supply Pub quiz questions for Section 2.1, with supporting information.	Stimulus 2.1.3 – Pub Quiz questions and supporting information
	Impart key information – give out handout Provide info about the impact of water scarcity on households, businesses, and nature.	Stimulus 2.1.4 – Handout about impacts of water scarcity
	Discuss as a group reactions to key information	,
	<ul> <li>Any surprises?</li> <li>Anything that is particularly interesting?</li> <li>Anything that really concerns them? Anything that frightens them?</li> <li>Anything that does not particularly concern them?</li> <li>Anything that they find difficult to believe or want to question?</li> <li>Anything they do not really understand or does not make sense to them?</li> <li>Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?</li> <li>Anything that changes their mind about how water supplies may change for their household in the future/the risk of water shortages?</li> <li>Anything that changes their mind about a need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.</li> </ul>	
	Participants make notes  Hand out key info summary for their folders. Remind them to note anything that influenced them.	
40 mins (12.05-	Session 2.2: Potential impact of extreme weather conditions on water supplies – how might climate change & what impact might it have on resilience?	
12.45pm)	Engage/prepare for info	Stimulus 2.2.1 – Pub

Timing	Content	Requirements
	Pub quiz questions for Section 2.2, with supporting information, and animation. These are aimed at convincing participants that extreme weather conditions are increasing and that their effects are already being felt in the UK.	Quiz questions and supporting information
	Impart key information – give out handout Provide info about climate change and impacts of these changes on water supply.	Stimulus 2.2.2 – Climate change animation storyboard
	<ul> <li>Discuss as a group reactions to key information</li> <li>What difference do you think any change in rainfall will make to your water supply?</li> <li>If there was a period of heavy rain causing some floods as a result, what difference would you expect that to make to your water supply?</li> <li>What do you think is more likely to affect you and your household – water shortages/drought or flooding? Why? (Clarify if necessary we mean flooding from rainfall rather than coastal / high tides)</li> <li>Have your feelings about of the relative risks of flooding and water scarcity changed at all from seeing the earlier information? Why?</li> <li>Do your views of flooding/rainfall affect your reaction to messages around water use/water saving? How?</li> <li>If perceptions of flooding undermines reactions to water saving messages then: <ul> <li>What needs to happen to address this? How could people be persuaded that water can be in short supply even if there have been floods at some point and possibly in different parts of England and Wales?</li> </ul> </li> </ul>	Stimulus 2.2.3 – Handout on how climate change could affect water supply – with local examples
	In relation to information imparted:  • Any surprises?	

Anything that really concerns them? Anything that frightens them?     Anything that does not particularly concern them?     Anything that does not particularly concern them?     Anything that does not particularly concern them?     Anything they find difficult to believe?     Anything they do not really understand or does not make sense to them?     Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?     Anything that changes their mind about the risk of water shortages and the need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.  Participants make notes individually Hand out key info summary for their folders. Remind them to note anything that influenced them.  LUNCH  LUNCH  Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.	Timing	Content	Requirements
<ul> <li>Anything that they find difficult to believe?</li> <li>Anything they do not really understand or does not make sense to them?</li> <li>Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?</li> <li>Anything that changes their mind about the risk of water shortages and the need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.</li> <li>Participants make notes individually Hand out key info summary for their folders. Remind them to note anything that influenced them.</li> <li>LUNCH</li> <li>Times (12.45-1.30pm)</li> <li>Session 2.3: Potential impacts of population growth on water supplies (how might the population change &amp; what impact might it have on resilience)</li> <li>Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.</li> </ul>			
Anything they do not really understand or does not make sense to them?     Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?     Anything that changes their mind about the risk of water shortages and the need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.  Participants make notes individually Hand out key info summary for their folders. Remind them to note anything that influenced them.  45 mins (12.45-1.30pm)  30 mins (1.30-2pm)  Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.  Followed by BBC			
<ul> <li>Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?</li> <li>Anything that changes their mind about the risk of water shortages and the need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.</li> <li>Participants make notes individually Hand out key info summary for their folders. Remind them to note anything that influenced them.</li> <li>45 mins (12.45-1.30pm)</li> <li>30 mins (1.30-2pm)</li> <li>Session 2.3: Potential impacts of population growth on water supplies (how might the population change &amp; what impact might it have on resilience)</li> <li>Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.</li> </ul>			
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Hand out key info summary for their folders. Remind them to note anything that influenced them.  45 mins (12.45- 1.30pm)  30 mins (1.30- 2pm)  Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.  Followed by BBC		strongly if they believed it to start with.	
them.  45 mins (12.45- 1.30pm)  30 mins (1.30- 2pm)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.  LUNCH  Stimulus 2.3.1 – For the supplies (how might the population change & what impact might it have on resilience) Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience) Stimulus 2.3.1 – For the supporting video.			
45 mins (12.45- 1.30pm)  30 mins (1.30- 2pm)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.  LUNCH  Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience)  Stimulus 2.3.1 – For Quiz questions a supporting information for Section 2.3, with supporting video.  Followed by BBC			
(12.45- 1.30pm)  Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.  Stimulus 2.3.1 – For Quiz questions a supporting information Followed by BBC			
1.30pm)  30 mins (1.30- 2pm)  Engage/prepare for info Pub quiz questions for Section 2.3, with supporting video.  Session 2.3: Potential impacts of population growth on water supplies (how might the population change & what impact might it have on resilience)  Cuiz questions a supporting information Followed by BBC		LUNCH	
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Pub quiz questions for Section 2.3, with supporting video.  Followed by BBC	<b>2</b> pm)	Engago /proparo for info	
		00	
		Pub duiz questions for Section 2.3, with supporting video.	_
Impart key info		Impart key info	
Provide info about population growth and impacts of this growth on water supply.  Stimulus 2.3.2 –		Provide info about population growth and impacts of this growth on water supply.	
Handout on		Discuss as a group reactions to key information	
		,	population growth
<ul> <li>Would you expect a change in population to make a difference to your water supply?</li> <li>What difference?</li> </ul> and decreasing household size			
• What difference:  • Who do you expect to manage this? – Water companies? Govt.?			Household Size
In relation to information imparted:		In relation to information imparted:	

Timing	Content	Requirements
	<ul> <li>Any surprises?</li> <li>Anything particularly interesting?</li> <li>Anything that really concerns them? Anything that frightens them?</li> <li>Anything that does not particularly concern them?</li> <li>Anything that they find difficult to believe?</li> <li>Anything they do not really understand or does not make sense to them?</li> <li>Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?</li> <li>Anything that changes their mind about the risk of water shortages and the need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.</li> </ul>	
20 mins (2.00- 2.20pm)	Participants make notes  Hand out key info summary for their folders. Remind them to note anything that influenced them.  Session 2.4: Potential impacts of changing consumer behaviour on water supplies (how might consumer behaviour change & what impact might it have on resilience)	Stimulus 2.4.1 – Pub Quiz questions and supporting information
	<ul> <li>Engage/prepare for info</li> <li>Pub quiz questions for Section 2.4</li> <li>Impart key information</li> <li>Provide info about changes in consumer behaviour and impacts of these changes on water supply.</li> <li>Thinking about the future, do you expect the average household to use more or less water than now? Why? PROMPT around water efficient appliances vs changing behaviour (e.g. more frequent showering)</li> <li>To what extent do you think that using less water might ever become the 'socially acceptable' thing to do? What would need to happen for this to become the case?</li> <li>How interested would you be in buying water efficient appliances? Why?</li> </ul>	Stimulus 2.4.2 – Handout on consumption

Timing	Content	Requirements
	<ul> <li>Discuss as a group reactions to key information</li> <li>In relation to information imparted:</li> <li>Any surprises?</li> <li>Anything particularly interesting?</li> <li>Anything that really concerns them? Anything that frightens them?</li> <li>Anything that does not particularly concern them?</li> <li>Anything that they find difficult to believe?</li> <li>Anything they do not really understand or does not make sense to them?</li> <li>Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?</li> <li>Anything that changes their mind about the risk of water shortages and the need for them to save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.</li> <li>Participants make notes</li> <li>Hand out key info summary for their folders. Remind them to note anything that influenced them.</li> </ul>	
25 mins (2.20- 2.45pm)	Session 2.5: Potential impacts of water company actions (what might water companies do & what impact might it have on resilience)  Engage/prepare for info Pub quiz questions for Section 2.5, and animation.  Impart key information Provide info about water company actions and impacts of these actions on water supply.  Discuss as a group:  What difference will this make to water supply?  What do you think water companies should be doing to ensure water supplies?  Which solutions do you prefer and why? And which do you have concerns about?	Stimulus 2.5.1 – Pub Quiz questions and supporting information  Stimulus 2.5.2 – Water company actions animation storyboard  Stimulus 2.5.3 – Handout on water company actions

Timing	Content	Requirements
	Who should pay for these solutions? Current customers or future customers? Why?	
	Discuss as a group reactions to key information	
	In relation to information imparted:	
	<ul><li>Any surprises?</li><li>Anything particularly interesting?</li></ul>	
	<ul><li>Anything particularly interesting?</li><li>Anything that really concerns them? Anything that frightens them?</li></ul>	
	Anything that really concerns them: Anything that highlens them:     Anything that does not particularly concern them?	
	Anything that they find difficult to believe?	
	Anything they do not really understand or does not make sense to them?	
	<ul> <li>Anything that is or is not relevant to them? Do they think anything they have heard about will affect their lives?</li> </ul>	
	Anything that changes their mind about the risk of water shortages and the need for them to	
	save water? i.e. persuades them if they weren't persuaded before, makes them feel more strongly if they believed it to start with.	
	Participants make notes	
	Hand out key info summary for their folders. Remind them to note anything that	
	influenced them.	
10 mins	Session 2.6: Pulling it all together / intergenerational fairness	
(2.45-	Before today, had you ever thought about the things we have discussed? Why/When?  How much did you know / understand the hig nicture habind water equips massages.	
2.55pm)	<ul> <li>How much did you know / understand the big picture behind water saving messages before today?</li> </ul>	
	<ul> <li>What difference, if any, does understanding the big picture, make to your views of the</li> </ul>	
	messages you saw this morning?	
	<ul> <li>What should a message about saving water say, so that people connect their water</li> </ul>	
	use back to rainfall, rivers and lakes and the bigger picture?	
	What, if anything, have you heard that has made you feel differently about water?	
	And before today, did you know that water bills include costs for investment in the kind of a latitude and the state of the state	
	solutions we talked about earlier, which aim to ensure there is enough water to go around in the future?	
	<ul><li>What do you think/how do you feel about this? Why?</li></ul>	
L	at do you timination do you tool about this. This	

Timing	Content	Requirements
	<ul> <li>We talked about some of these solutions – like reservoirs - taking a couple of decades to build and to start providing more water. The costs to build a reservoir are felt by companies long before it provides water, so customers start to pay for the investment via their bills many years before it delivers. Some customers may not actually get the benefit of the reservoir they have paid towards - if they move away or they are elderly. And some customers who are new to the area or yet to become bill payers get the benefit but may not have paid towards it. What do you think about this?</li> <li>If you had to explain to someone that their water bill was going to increase to help pay for one of these big, future solutions – such as a reservoir – what would you say? What would be important for them to hear about?</li> <li>Is there anything we've talked about today that you will tell your friends and family about? (check to see what has had an impact on them)</li> </ul>	
	GROUP SESSION (in original groups of 8 like-minded participants) Session 3: Identifying motivating messages and how to overcome potential barriers	
10 mins (2.55- 3.05pm)	Complete individual questionnaire  Participants to complete a short questionnaire that will aim to uncover individual reactions to what they have just heard. These can be linked to the information collected from participants at the recruitment stage and will help target messages to typologies.	Questionnaire
45 mins (3.05- 3.50pm)	<ul> <li>Develop a message Explain that we would like them to come up with some suggestions/an outline for a newspaper article or blog that would convince people like you that: <ul> <li>a) There's not going to be enough water for future generations.</li> <li>b) Something needs to be done about this, including all of us using less water.</li> </ul> </li> <li>If they are not convinced about the importance of planning for resilience and saving water today, why? What would persuade them of the importance of taking action (today) to save water. If there is something that changed their mind today, please include that. (ENSURE THIS IS CAPTURED) <ul> <li>If they haven't heard anything today which influences their thinking about saving</li> </ul> </li></ul>	Pro forma for groups to fill in

Timing	Content	Requirements
	<ul> <li>water then what might achieve this?and include that.</li> <li>Give them a pro forma to fill in. Emphasise that we are after suggestions/an outline for an article, not the full article.</li> <li>Split into small sub-groups of 2-3. Sub-groups come up with their suggestions for a newspaper article.</li> <li>Subgroups present back their idea to their group of 8. Ask them about: <ul> <li>What did you want to get across/choose to include?</li> <li>What did you choose to leave out?</li> <li>Did they choose to focus on local or national info/messages?</li> <li>Would the message persuade you? If not, what would?</li> <li>What's the most important message overall?</li> </ul> </li> <li>VISUALISER TO RECORD: SUMMARY OF THE MESSAGES THAT PARTICIPANTS CAME UP WITH.</li> <li>Final thoughts <ul> <li>If you needed to increase bills to pay for investment into the solutions discussed earlier, how would you explain the importance of this to your customers?</li> <li>If you wanted to encourage customers to reduce their water usage, how would you do this?</li> <li>What would you say to them?</li> </ul> </li> </ul>	
5 mins (3.50- 3.55pm)	PLENARY SESSION  Thank for time and contribution Explain what will happen with feedback Thanks and brief response to feedback from lead facilitator	Slides
5 mins (3.55- 4.00pm)	ON TABLES Distribute and sign for incentives	Incentives signature form



# **Talking about Water**

June 2017

# Introduction

**Community Research** 



# What we'll be doing

- Getting your views by discussing things on your tables
- Learning about some issues affecting water companies and future water supply
- Doing some activities at your tables
- Finishing on time!







#### Who is here?

- You representing consumers
  - to tell us what you think
- Community Research team
  - to facilitate and talk to you
- Observers from the water sector
  - to listen and learn
- Vanessa
  - to capture the discussion in graphics



#### Ground rules

- Everyone's view is equally valid
- Please join in
- Ask questions don't be embarrassed
- Give everyone else a chance help the facilitator
- Keep to time
- Mobiles off (or on silent)



#### Agenda

- 9.30 Welcome and introductions
- 10am Session 1
- 11.20 Session 2 Part 1
- 12.45 Lunch
- 1.30 Session 2 Part 2
- 2.55 Session 3
- 4pm End



#### Session 2.1

Potential impacts of changes to water supply



# Animation 1 NB Edit the hyperlink



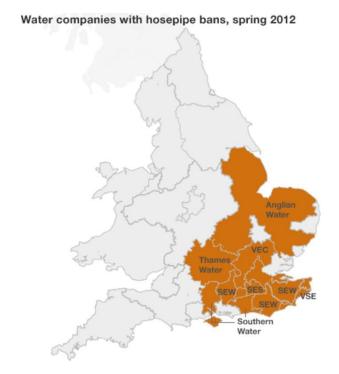
### Q1 When was the last time a hosepipe ban was put in place in any part of England or Wales?

- a) Last Summer (2016)
- b) Spring 2012
- c) Spring 2005
- d) Summer 1989
- e) Summer 1976



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- e) Summer 1976



Hosepipe bans were put in place April 2012 for some 20 million customers of Anglian Water, South East Water, parts of Southern Water, Sutton and East Surrey Water, Thames Water, and Affinity Water.

### Q2 True or false? During a hosepipe ban automated car washes are shut down

- a) True
- b) False



### Q2 True or false? During a hosepipe ban automated car washes are shut down

a) True

a) False

During the last ban, this was not the case. This might seem odd, but automated car washes such as those found in service stations across the nation use around 130 litres of water per car. That's as much as 70 per cent less than a hosepipe uses. Many actually recycle much of the water they use, too.



Q3 Which of the following European cities, on average, gets more annual rainfall (in inches) than London? (you can pick as many as you wish)

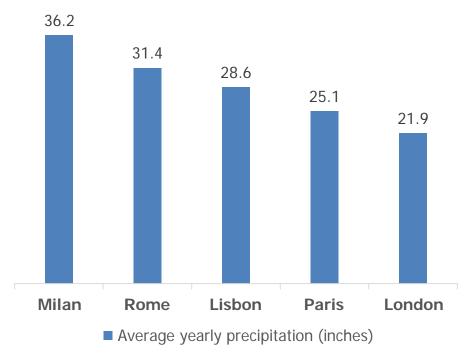
- a) Rome
- b) Milan
- c) Paris
- d) Lisbon



# Q3 Which of the following European cities, on average, gets more annual rainfall (in inches) than London? (you can pick as many as you wish)?



- b) Milan
- c) Paris
- d) Lisbon



London is actually one of the driest European capitals. We tend to assume that we get lots of rain but for some parts of the country (the South and east in particular) this is simply not true

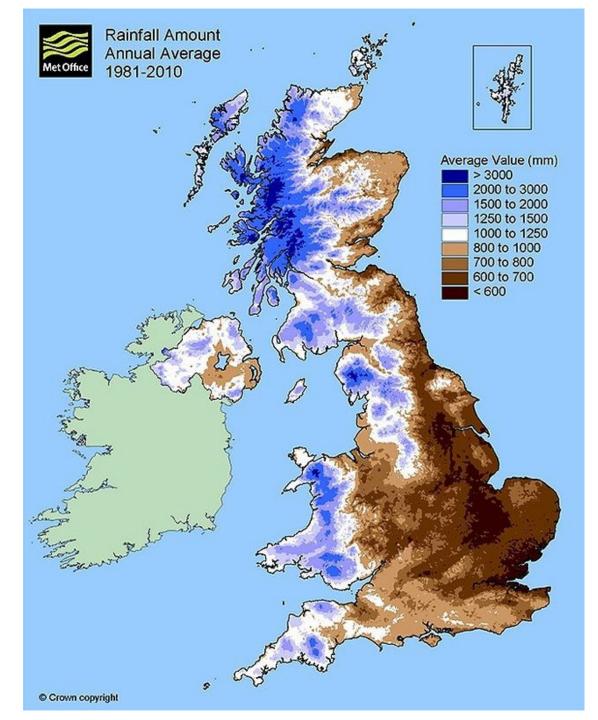


#### The rainiest parts of England and Wales are:

- North West England

   especially the Lake
   District in Cumbria
   and western facing
   slopes of the
   Pennines.
- Western and Central Wales - particularly the mountainous Snowdonia region in the north.
- South West England

   mainly the higher
   elevation areas of
   Dartmoor, Exmoor
   and Bodmin moor.



# Q4 April this year was drier than usual. What percentage of the average rainfall did the UK see?

- a) 78%
- b) 68%
- c) 58%
- d) 48%



# Q4 April this year was drier than usual. What percentage of the average rainfall did the UK see?

- a) 78%
- b) 68%
- c) 58%
- d) 48%

This was one of the driest Aprils on record. The average rainfall was 34mm across the UK when we would expect it to be around 71mm. Water companies have been encouraging their customers to use water wisely but if the dry weather continues it increases the likelihood that hosepipe restrictions may be needed to conserve water supplies

#### Session 2.2

Potential impacts of extreme weather conditions on water supply



# Q1 According to a 2016 survey what proportion of climate scientists agree that Climate Change is real and that it is caused by humans?

- a) 55%
- b) 70%
- c) 87%
- d) 97%



# Q1 According to a 2016 survey what proportion of climate scientists agree that Climate Change is real and that it is caused by humans?

- a) 55%
- b) 70%
- c) 87%
- d) 97%

Lots of people tend to think that scientists aren't that sure about climate change but nearly all of them are totally certain about it. The study also found that the more knowledge of climate science these scientists have, the more likely they are to believe in human-caused climate change.



# Q2 True or false? 8 out of the 10 warmest ever years in the UK (based on average annual temperatures) have occurred since 1990

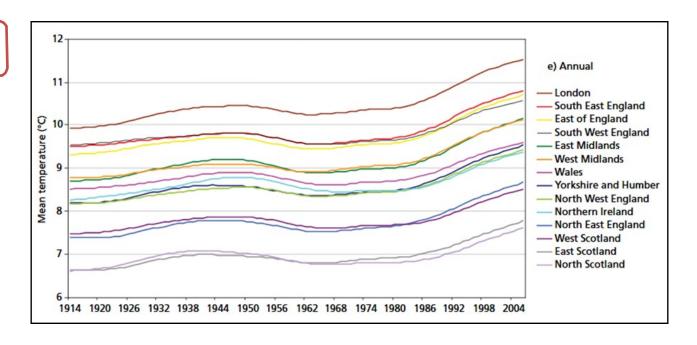
- a) True
- b) False



# Q2 True or false? 8 out of the 10 warmest ever years in the UK (based on average annual temperatures) have occurred since 1990

a) True

b) False



In fact all 10 of the 10 warmest years on record have occurred since 1990.

### Q3 True or false? Heavy rainfall, floods and storms are becoming more frequent in the UK

- a) True
- b) False



### Q3 True or false? Heavy rainfall, floods and storms are becoming more frequent in the UK

a) True

a) False

There is evidence that heavy rainfall events may have become more frequent over time: what in the 1960s and 1970s might have been a one-in-125-day event is now more likely a one-in-85-day event.

It may seem a contradiction that the temperature is getting warmer and we are seeing more rain, but in fact the two things are closely linked. Going back to our water cycle, warmer air can hold more water vapour. The higher temperatures that we have experienced have increased the atmosphere's moisture storage capacity by about seven per cent and this clearly increases the potential for extreme rainfall and flooding.

# Animation 2 NB Edit the hyperlink



#### Session 2.3

Potential impact of population growth on water supply



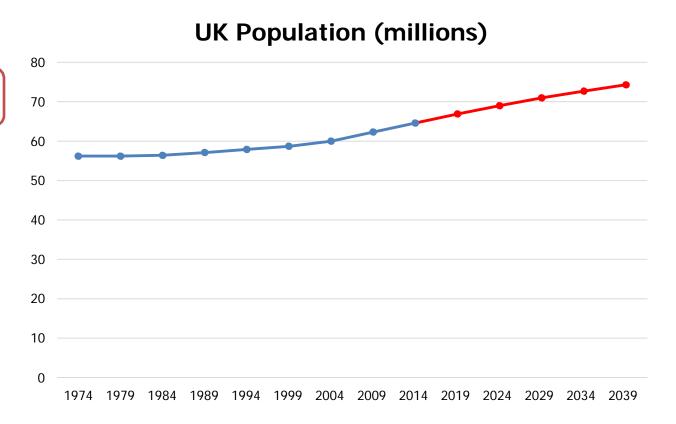
### Q1 The UK's population is currently around 65 million people. It is growing. When is it expected to reach over 70 million?

- a) 2021
- b) 2022
- c) 2027
- d) 2030



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### Q2 By the year 2040 which of the following is expected to happen to the population of London?

- a. It will stay about the same
- b. It will grow by the equivalent of adding the population of Cardiff (0.3 million people)
- c. It will grow by the equivalent of adding the population of Edinburgh (0.5 million people)
- d. It will grow by the equivalent of adding the population of Birmingham (1 million people)
- e. It will grow by the equivalent of adding the populations of Birmingham, Edinburgh and Cardiff (1.8 million people).



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- e. It will grow by the equivalent of adding the populations of Birmingham, Edinburgh and Cardiff (1.8 million people).

All regions of England are projected to see an increase in their population size. London and the South East is growing faster than everywhere else. The Greater London Authority (GLA) estimates that the capital's population will grow by 1.8 million by 2040 – this is the equivalent of adding the current populations of Birmingham, Edinburgh and Cardiff to the city. Nine out of 10 fastest-growing local authorities are in London, with the eastern boroughs of Tower Hamlets, Barking and Dagenham and Newham topping the charts.

# Q2 By 2031 (i.e. in 14 years' time) in the Anglian Water area, which of the following is closest to the current predictions of what will happen to the population?

- a. For every 10 people living here now there will be 9 people by 2031 (10% reduction)
- b. For every 10 people living here now there will be 11 people by 2031 (10% growth)
- c. For every 10 people living here now there will be 12 people by 2031 (20% growth)
- d. For every 10 people living here now there will be 13 people by 2031 (30% growth)
- e. For every 10 people living here now there will be 15 people by 2031 (50% growth)



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- d. For every 10 people living here now there will be 13 people by 2031 (30% growth)
- e. For every 10 people living here now there will be 15 people by 2031 (50% growth)

All regions of England are projected to see an increase in their population size. This region is one of the fastest growing parts of the UK with a predicted 34 per cent growth in the number of households by 2031.

### Q2 By 2031 by what percentage is the population of Wales projected to change?

- a. It will grow by 5.1%
- b. It will grow by 3.1%
- c. It will stay about the same
- d. It will shrink by 3.1%
- e. It will shrink by 5.1%



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- b. It will grow by 3.1%
  - c. It will stay about the same
  - d. It will shrink by 3.1%
  - e. It will shrink by 5.1%

The population of Wales is projected to carry on increasing by 3.1 per cent to 3.19 million by 2024 and by 6.1 per cent to 3.28 million by 2039. This is slower than the population growth in England, but about the same as for Scotland.

### Q2 Between 2016 and 2036 which of the following is expected to happen to the population of Yorkshire and the Humber?

- a. It will grow by 441,000 people (60 people per day)
- b. It will shrink by 441,000 people (60 people per day)
- c. It will grow by 220,000 people (30 people per day)
- d. It will shrink by 220,000 people (30 people per day)
- e. It will stay about the same



### Q2 Between 2016 and 2036 which of the following is expected to happen to the population of Yorkshire and the Humber?

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- b. It will shrink by 441,000 people (60 people per day)
- c. It will grow by 220,000 people (30 people per day)
- d. It will shrink by 220,000 people (30 people per day)
- e. It will stay about the same

All regions of England are projected to see an increase in their population size. The three northern regions (NW, NE and Y&H) are projected to see the slowest population growth in the country. The total northern population is projected to grow by just over 1 million to 16.3 million. This equates to an increase of 7%. Yorkshire & The Humber will see the greatest proportionate increase in population (8.1%) of the 3 Northern regions. Between 2015 and 2020 Yorkshire Water expects the population of the region to grow with around 100,000 more properties needing water and waste water treatment.

#### Video

http://www.bbc.co.uk/news/uk-34666382



#### Session 2.4

Potential impact of changing consumer behaviour on water supply



Q1 In 1930, on average, all people in the UK used about 126 litres of water per day in their homes. What is the equivalent figure today (including those with and without meters)?

- a) 109 litres
- b) 119 litres
- c) 129 litres
- d) 139 litres
- e) 149 litres



Q1 In 1930, on average, all people in the UK used about 126 litres of water per day in their homes. What is the equivalent figure today (including those with and without meters)?

- a) 109 litres
- b) 119 litres
- c) 129 litres
- d) 139 litres
- e) 149 litres



Going as far back as 1830 one person in the UK would have managed with just 18 litres a day. Water consumption per head has been going up steadily since 1930. The average person uses 13 more litres a day than in 1930 – that's 23 pints more per person, every single day!

Q2 On average, people in the UK <u>without</u> a water meter in their home use around 153 litres of water each day? How many litres do people living in households <u>with</u> a water meter use?

- a) 113 litres
- b) 123 litres
- c) 133 litres
- d) 143 litres



Q2 On average, people in the UK <u>without</u> a water meter in their home use around 153 litres of water each day? How many litres do people living in households <u>with</u> a water meter use?

- a) 113 litres
- b) 123 litres
- c) 133 litres
- d) 143 litres

People in homes with a water meter use less water. On average they use 30 litres less per day which is nearly 11,000 litres fewer per year (19,269 pints). This makes sense – people who pay for what they use are more aware of their water use and tend to be more careful. Around half of households now have a water meter so you can imagine how this figure can add up!

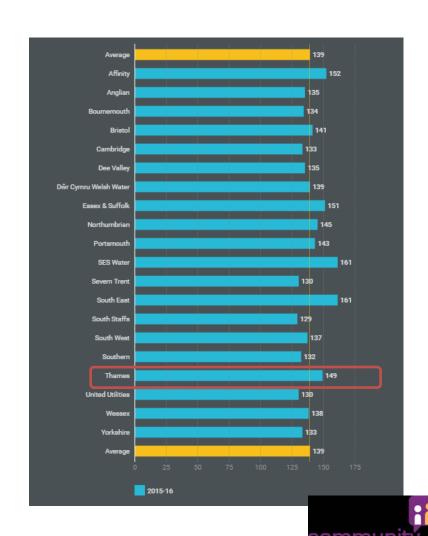
- a) True
- b) False



a) True

b) False

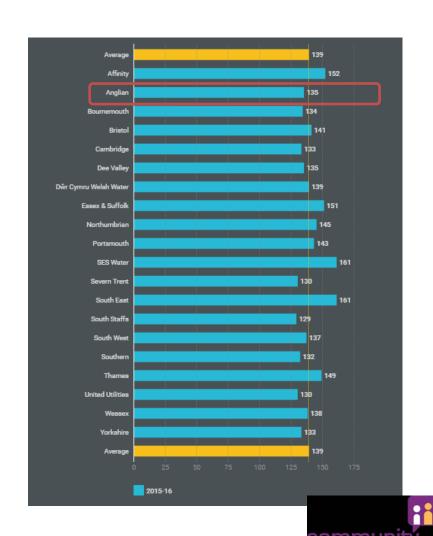
People in this area use an average of 149 litres a day (average use 139 litres)



a) True

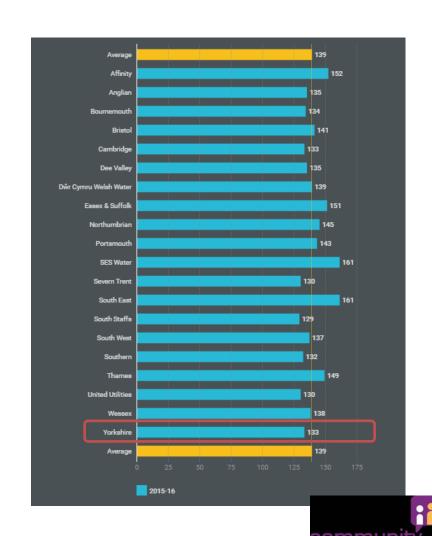
b) False

People in this area use an average of 135 litres a day (average use 139 litres)



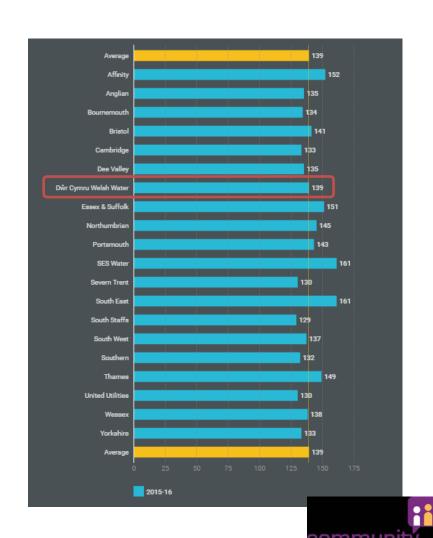
- a) True
- b) False

People in this area use an average of 133 litres a day (average use 139 litres)



- a) True
- b) False

It's the same! The average use is 139 litres – and so is the average for Wales!



### Q4 True or false? A 7 minute power shower uses less water than an average bath.

- a) True
- b) False



### Q4 True or false? A 7 minute power shower uses less water than an average bath.

- a) True
- b) False

A bath typically uses around 80 litres, while a short shower can use as little as a third of that amount. But many power-showers may actually use more than a bath – 13-22 litres per minute (so a 7 minute shower could use as much as nearly two baths!)

#### Session 2.5

Potential impact of water company actions



- a) 0
- b) 1
- c) 3
- d) 5



- a) 0
- b) 1
- c) 3
- d) 5

The last reservoir was built in 1989 (Roadford Lake in Devon). The last one built in this area was the Queen Mother reservoir in 1976.



- a) 0
- b) 1
- c) 3
- d) 5

The last reservoir was built in 1989 (Roadford Lake in Devon). The last one built in this area was the Grimwith reservoir in 1983.



- a) 0
- b) 1
- c) 3
- d) 5

The last reservoir was built in 1989 (Roadford Lake in Devon). The last one built in this area was the Llyn Brianne reservoir in 1972.

- a) 0
- b) 1
- c) 3
- d) 5

The last reservoir was built in 1989 (Roadford Lake in Devon). The last one built in this area was the Rutland Water reservoir in 1976.



# Q2 How has the amount of leakage changed in the past 5 years?

- a) Increased
- b) Decreased
- c) Stayed the same



# Q2 How has the amount of leakage changed in the past 5 years?

- a) Increased
- b) Decreased
- c) Stayed the same

The water companies have made progress in reducing leaks, and leakage is down about a third from its 1994-95 high.

Some leaks in water pipes are inevitable as pipes can wear out or be damaged by freezing weather or the weight of traffic on roads. Water companies have to find and repair leaks and to replace pipes that wear out or burst....but it will never be possible (too expensive) to stop leakage all together.

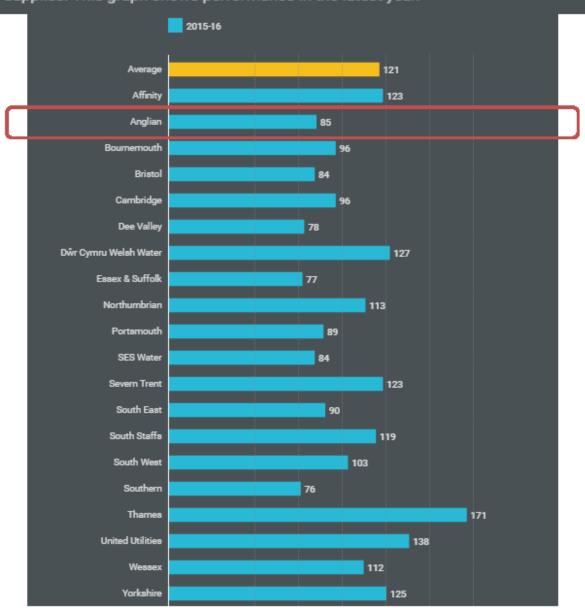
One way to measure this is to look at the amount of water leaked from each company's pipes compared to the number of properties the company supplies. On average, leakage is at 121 litres per property per day, nearly the same amount of water used by a person in a day (123 litres per person per day, metered). About a third of this leakage is from the part of the supply pipe that customers are responsible for.

How companies do on this varies a lot...

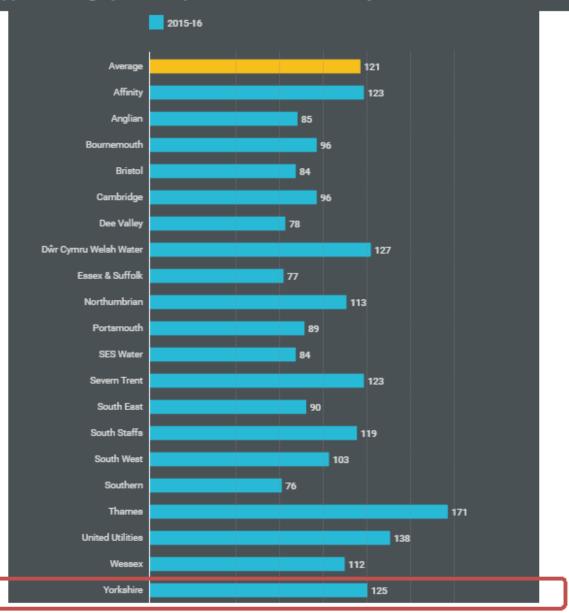




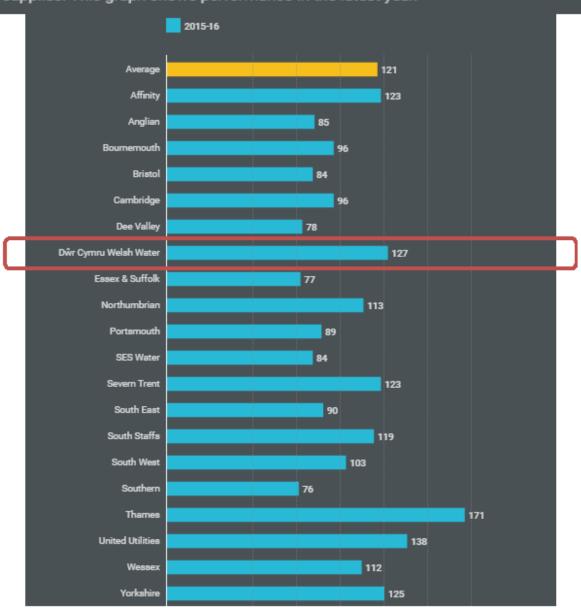














# Animation 3 NB Edit the hyperlink



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#### The Consumer Council for Water

1st Floor, Victoria Square House, Victoria Square, Birmingham B2 4AJ Visit our website: <a href="www.ccwater.org.uk">www.ccwater.org.uk</a>
Follow us @WaterWatchdog

Contact: Dr Ana-Maria Millan, Policy Manager