



Water and wellbeing: Is there a link?

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SPREE project

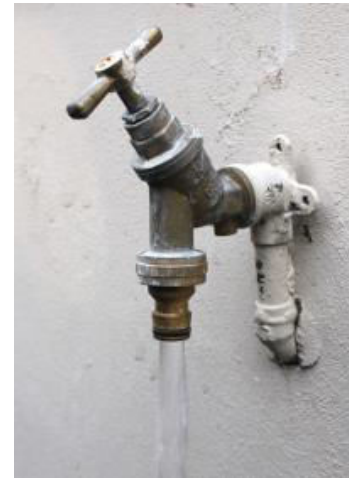
- **SPREE** project (**S**ervicizing **P**olicy for **R**esource **E**fficient **E**conomy) is a three-year project under the EU's Seventh Framework Program (FP7).
- SPREE aims to identify potential “Servicizing Policy Packages” for the establishment of Servicizing systems which facilitate the transition from selling products to providing services
- Case studies on water, transport and agriculture
- **The water case study has explored the link between household water consumption and wellbeing**



Water and wellbeing



- Access to sufficient water is vital for health and wellbeing
 - reliable safe water available in homes helps prevent a range of water borne diseases such as diarrhoea, typhoid, cholera and cryptosporidiosis
 - up to 4.2% of all deaths globally are preventable if everyone had access to safe and reliable drinking water, sanitation and practiced appropriate hygiene
- the draft UN Sustainable Development Goals to be released in 2015 include the goal “by 2030, achieve universal and equitable access to safe and affordable drinking water for all”



Water and wellbeing

- WHO and UNICEF (2000) suggested the amount of water required for meeting the most basic domestic needs is 20 litres per capita per day located within one kilometre of a person's dwelling
- Howard and Bartram (2003) argue that
 - 20 litres per day - basic access
 - 50 litres per day - intermediate access that will allow most requirements to be met
 - 100 litres per day - optimal access that will be sufficient to meet all direct household requirements.

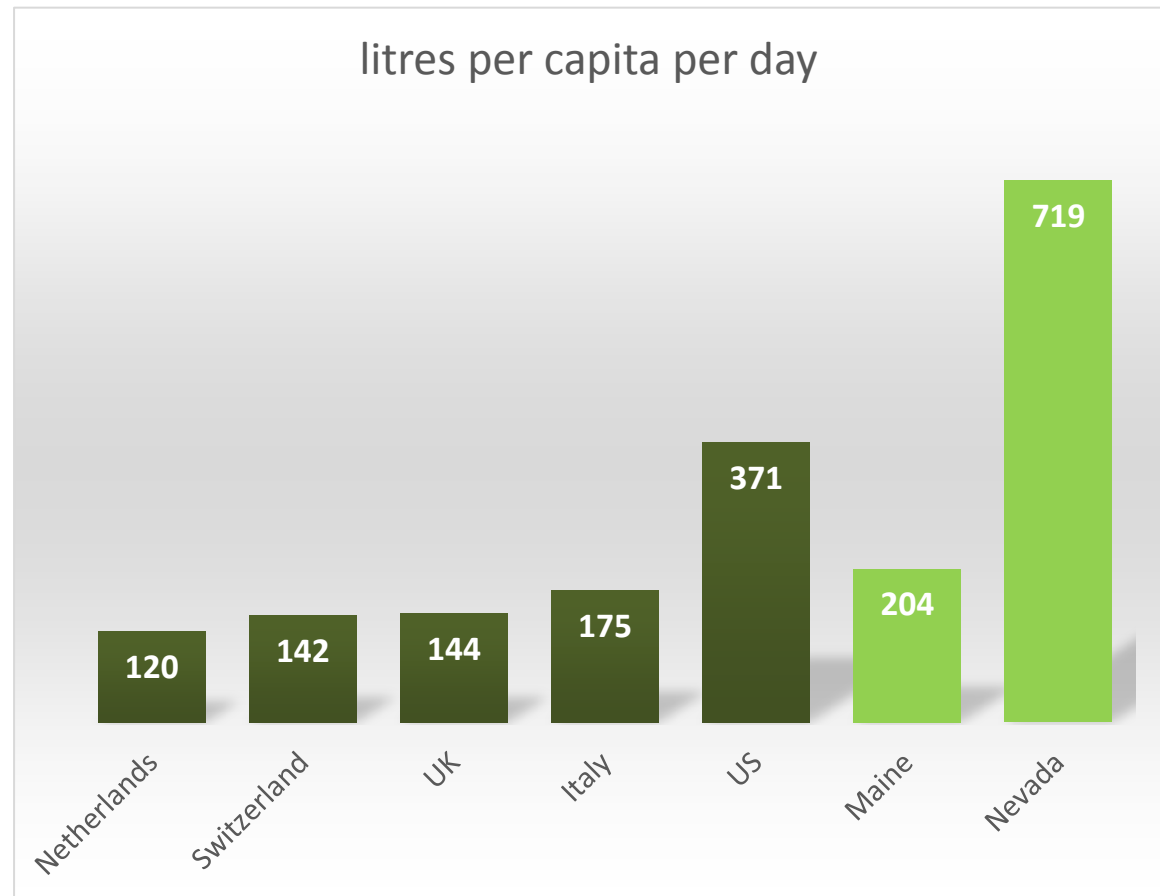


Source: Sustainable Sanitation Alliance

Water use

- Average household water in high income countries is variable

- Basic access to water resources is clearly critical to achieving a high quality of life and good wellbeing



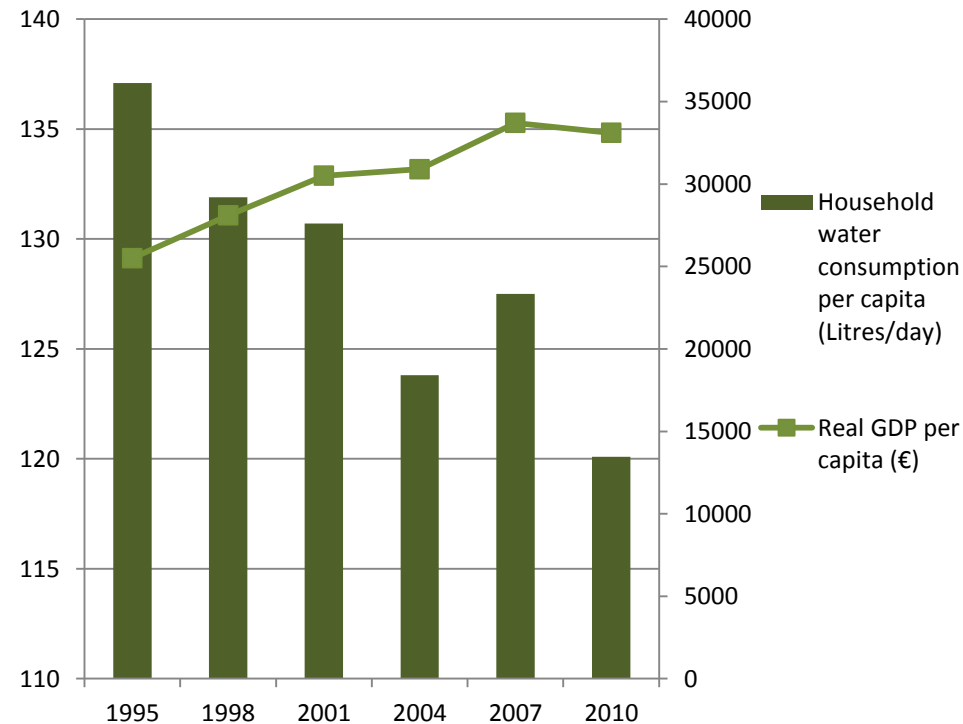
- The extent to which water consumption contributes to wellbeing once basic needs have been met is not clear

Water use and wellbeing



- Household water consumption per capita has fallen in some northern European countries in recent years

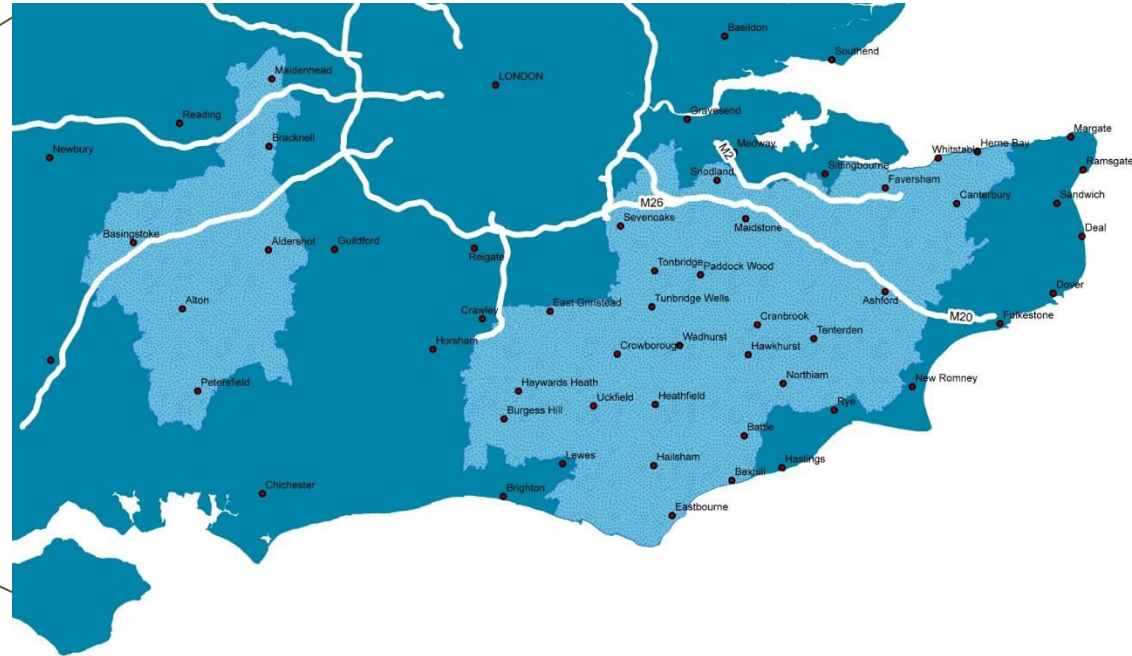
- It is not clear how much further consumption can be reduced before this impacts upon well-being
- It can be hypothesised that some people may gain a higher sense of wellbeing as a result of high water use



Water consumption in the Netherlands



Household Survey area



- A household survey was conducted in the supply area of South East Water
- 342 respondents
- The survey assessed self-reported wellbeing, attitudes to the environment and water use
- Actual water consumption data for the surveyed households were received from South East Water



Water use and wellbeing survey



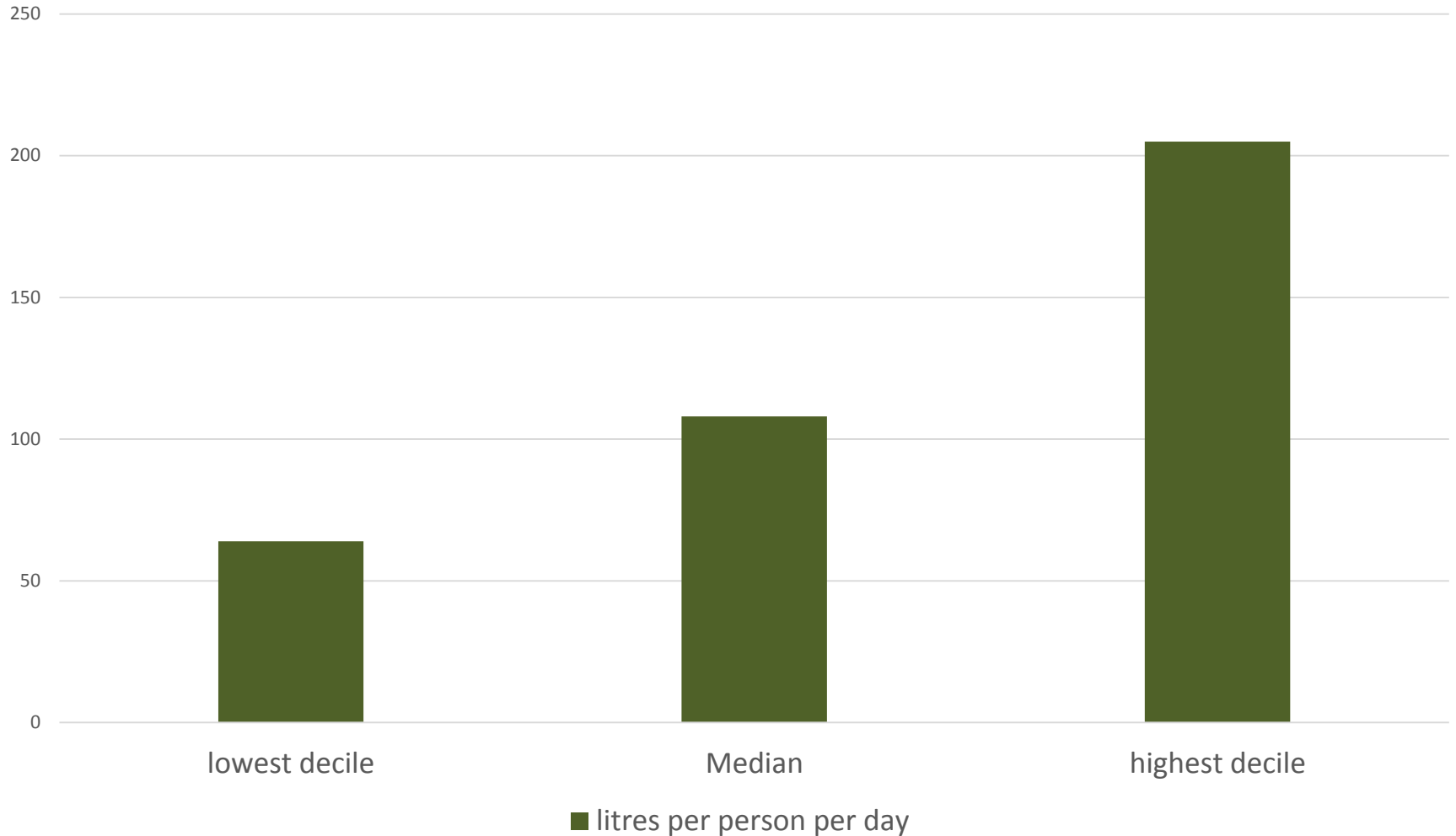
Questions	Question type	Examples
1 , 2, 5, 7	Screening: Negative answers resulted in the questionnaire being closed	Is the water you use metered? Do you live in the area supplied by South Easter Water, as shown on the map?
4, 6, 7	Household type	Do you have garden?
7, 8, 9, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27,28,	Water use and water conservation practices	How much do you pay for your water and sewerage on an annual basis? Have you installed a rainwater butt since you lived in your current home?
10, 17, 18, 19, 20	Quality of life and wellbeing	How satisfied are you with life in general these days? Taking all things together, on a scale of 1 to 10, how happy would you say you are?
21	Environmental attitudes	How much do you agree or disagree with each of these (7) statements? We are approaching the limit of the number of people that the earth can support.....
3, 29, 30, 31, 32, 33	Household demographics	Male or female? How old are you?



Survey results



Household water use





Survey results



	Correlation
How much do you pay for your water and sewage on an annual basis?	0.220*
Do you think your water bill is very expensive, expensive, fair, cheap, or very cheap?	-0.176*
Agreement with the statement "I am optimistic about the future"	-0.146*
Can afford having friends or family visit for a drink or a meal at least once a month	0.185*
Satisfaction with "Your health" on a scale of 1 to 10	-0.207**
Number of adults in household	-0.185*
Number of children in household	-0.322**
Total number of people in household	-0.339**
Age of respondent	0.173*

* Significant at the 0.05 level ** Significant at the 0.01 level

- Lack of any statistically significant correlations of water use and water saving attitudes or stated practices

Statement	Correlation ⁺
I feel I need to shower or bath every day	0.100
I enjoy taking long showers and baths regularly	0.036
Gardens should not be watered during dry summer periods	-0.003
I feel better using dual-flush toilets as they avoid wasting water	0.040
I feel better about myself when I avoid wasting water	0.057
Being able to use as much water as I want is a basic right	0.079
I need to save water in order to save money	-0.012
I need to save water as it is good for the environment	-0.012
Having to use less water would make me unhappy	0.078
It is really important to save freshwater during drought	-0.024
Most households use more water than we do	-0.062
The quality of showering / bathing experience is more important than the volume of water used	-0.011

⁺ None statistically significant

Conclusions



- The amount of water being consumed did not measurably impact upon survey respondents' overall sense of wellbeing
- The lack of any identifiable link may be due to the low levels of consumption that were seen being entirely voluntary
- Financial constraints appeared to limit water consumption in very few any of the households surveyed, so when consumption was low it was still generally unconstrained
- If water companies take measures which successfully encourage households to voluntarily cut their consumption, there should be little or no impact on wellbeing



- Water use appeared to be unlinked to either environmental attitudes, attitudes to water use or the stated adoption of water saving measures
 - People who expressed strong environmental concern were no more likely to be low water consumers than people less concerned about the environment



- People who thought that saving water was important and said they tried to save water were no more likely to be low water consumers than people who valued water intensive practices

- Whether or not people were environmentally concerned or consciously tried to save water didn't seem to make a measurable difference to their actual water consumption
- Achieving long term change likely to depend upon efficiency improvements of water using appliances since seeking a reduction in consumption via attitudinal change is likely to be ineffective

