

Resilience and transition in response to water stress scenarios:  
Responses from water stakeholders at a catchment level

- The Water Efficiency in Buildings Network (Watef), is funded by DEFRA, and coordinated by Dr Kemi Adeyeye of the School of Environment and Technology, University of Brighton.
- Watef are running the Water Efficiency Conference 9<sup>th</sup> -11<sup>th</sup> September at the University of Brighton:  
<http://www.waterefficientbuildings.co.uk/conference>

- For more details contact:

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**Is resilience necessary to support transition; or does resilience hamper transition in adapting to water stress scenarios?**

The research was conducted in **2004** along the **River Nene**, which rises outside of Northampton and exits at the Wash, located in one of the **driest regions of the UK**.

The research involved **empirical fieldwork along the whole catchment**, and included a series of **interviews with stakeholders** and a **survey of domestic water household users** along the River Nene catchment.

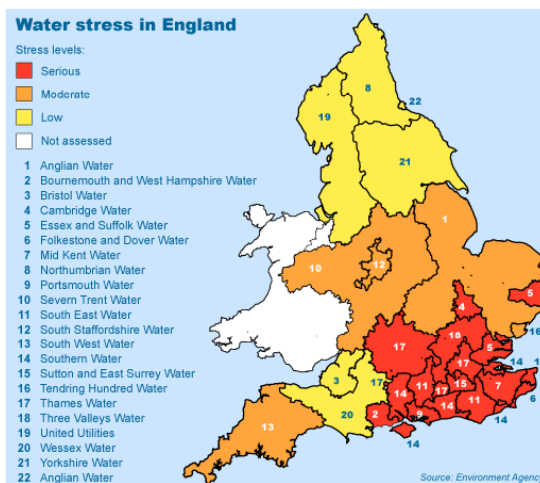
I welcome feedback from other organisations and researchers

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- **Water stress: 1700** cubic metres of water per person. Below **1000 cubic metres** this becomes water scarcity.
- Professor Louise Heathwaite, Lancaster University, calculates **South East of England have annual renewable supplies per person of 610 cubic metres.**
- As a country we have the **technical ability** to prevent water stress; we need to utilise resources collaboratively .
- **Types of Water Stress: Drought, Flooding, Population hubs, Water quality, Climatic**

**Duration: Seasonal, episodic, erratic, one-off, long-term**

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### What do we mean by resilience?

**“The capacity of an individual, community or system to adapt in order to sustain an acceptable level of function, structure, and identity”.** Cabinet Office, 2013.

We know what it is – but how do we measure it; and what time frame are we talking about –

**“In the case of a country, resilience typically refers to the country’s ability to cope with or recover from a shock.... The indicators used to assess a country’s resilience typically include some measure of fiscal capacity, institutional strength, and level of social development.”**  
UNDP, 2011.

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### What do we mean by transition?

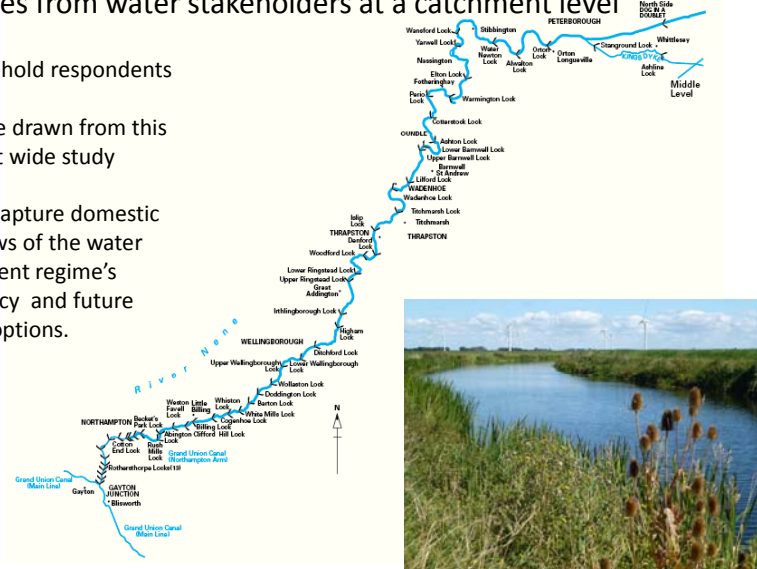
- A movement from one mode of being to another
- Transition can be described as a **movement, passage or change from one position, state, stage, subject or concept that enables change and continuity at the same time.**
- Managed transition: post-apartheid **South Africa**. The **Transition Town** movement.
- **How is it possible to transition when possible futures are only glimpsed?**
- **At what point does a resilient approach forestall the need to make a transition?**

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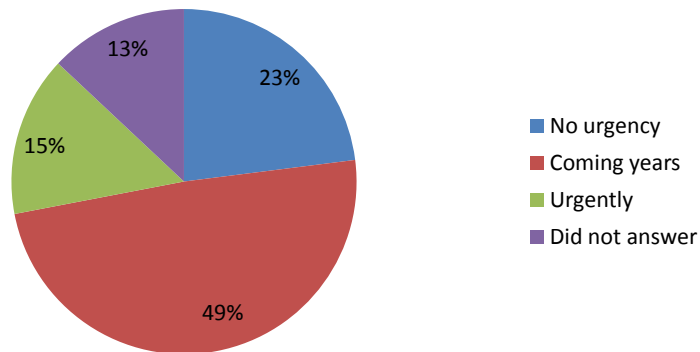
390 household respondents

Results are drawn from this catchment wide study

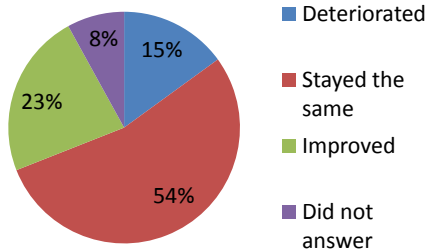
Aim is to capture domestic users' views of the water management regime's competency and future planning options.



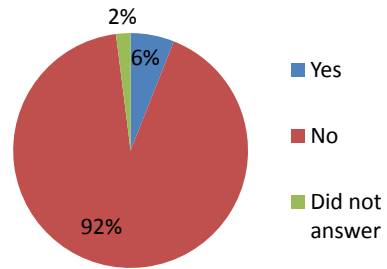
**In your opinion, is water management in your area an issue that needs to be addressed:**



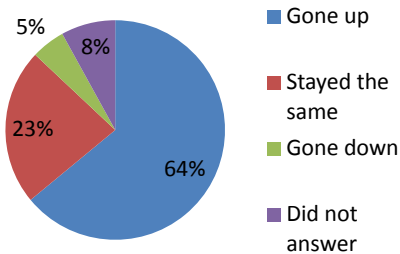
Would you say the **overall quality of the water environment in your surrounding area** in the recent past, i.e. the last 10 years, has:



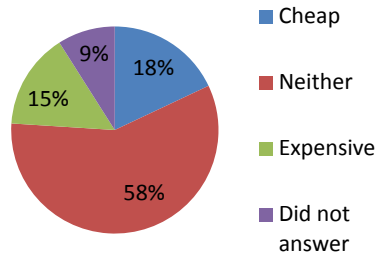
Would you like the opportunity to be involved in discussions and debates on the present and future management of water resources?



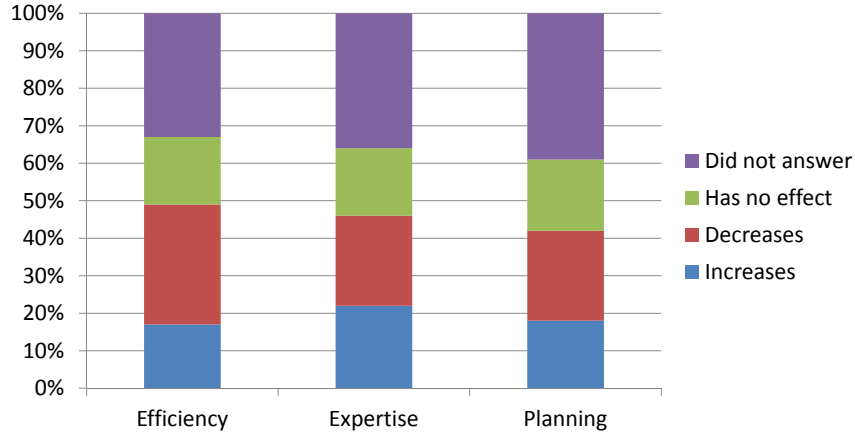
Do you feel in the last ten years your water bill has:



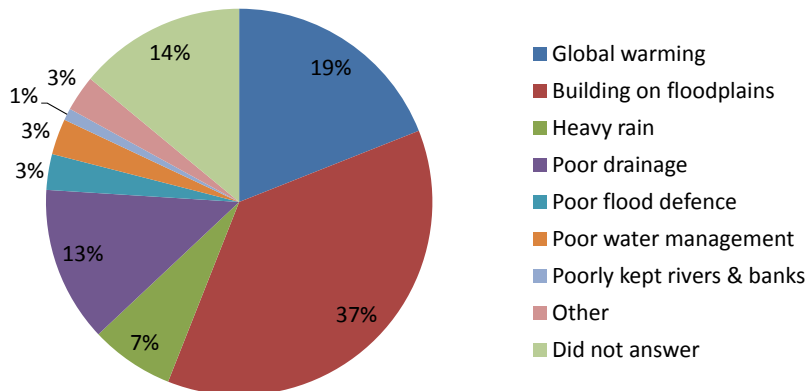
On the whole, do you think that the tap water that is supplied to your household is:



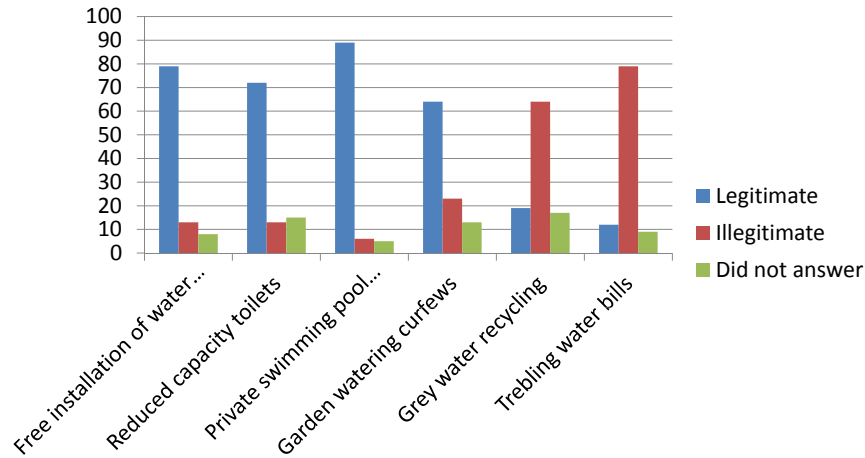
Water resource management has evolved over time with different bodies taking responsibility for different management functions. Do you feel this separation of functions increases or decreases overall water resource management **efficiency** , **expertise** and **planning** in the UK:



Many homes in the UK have been adversely affected by flooding events. What do you think is the cause of flooding?



From the following list please indicate which you feel to be a **legitimate** policy change and which an **illegitimate** policy change in the context of growing water stress:



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#### Looking at the results to identify resilience

- The **research seems to suggest that the existing water management regime is viewed as competent**
- Yet when we look at the question of being actively involved in water management **92% of respondents did not want to be involved**
- **Price seems a low agenda issue**, Yet asking respondents to pay water bills that might more accurately reflect the cost of water in society was **strongly rejected**

**At what point does resilience prevent adaptation?**

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**Looking at the responses to identify transition:**

- **A desire for change is absent.**
- The **memory horizon** for public agendas is quite short.
- **How long can resilience hold against the need for transition?**
- Retrofitted grey water use, 64% illegitimate, tripling water tariffs 79% illegitimate. **Yet both will be vital in adjusting to future water stress scenarios.**
- **Transition might not come out of experience but abrupt change – sometimes stated as a paradigm shift.**





Overdiepse Polder, an infrastructure project in the southeastern province of Brabant south of Amsterdam, will have eight elevated farms

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**From resilience to transition**

- **Transition requires a shift to a new recognition that 'the past is a foreign country'.**

Water stress can be under the radar.

- **Resilience is a short term stop gap towards a wider longer term transition to another mode of being.**

Will we enable a **managed, planned transition** or does there need to be an abrupt rupture to enable '**shock wave**' change to a new water management paradigm?

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**Future research**

Funding proposals have been submitted to carry on where this research on the River Nene left off, to explore in more detail issues of resilience and transition in respect to changing water environments.

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