

A Response to the Government Consultation on UK Mandatory Water Efficiency Labelling

23 November 2022

Executive summary:

In response to this call for evidence on [UK Mandatory Water Efficiency Labelling](#) by Department for Environment, Food & Rural Affairs, we provide evidence and policy recommendations concerning the following questions:

Question 5: Are there any additional elements required in the labelling specification?

Question 13: To what extent do you agree or disagree with the proposed mandatory water efficiency labelling enforcement plan?

We present evidence to support the following policy recommendations:

We strongly agree with the introduction of mandatory water efficiency labelling of items such as taps, showers, toilets, and washing machines. Labelling should report clear information not only on the litres of water saved, but also on the related financial gains for the households, over the expected life-time of the products.

Our recommendations draw heavily from our recent paper:

Ansink, Erik and Ornaghi, Carmine and Tonin, Mirco (2021) "Technology vs information to promote conservation: Evidence from water audits". *Tinbergen Institute Discussion Paper 2021-014/VIII*, Available at SSRN: <https://ssrn.com/abstract=3779801>

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Carmine Ornaghi is a Professor of Economics at the University of Southampton. His papers have been published in leading scientific journals, including *Energy Economics*, the *Journal of Applied Econometrics*, the *International Journal of Industrial Organization* and the *Journal of Industrial Economics*. In the last five years, Prof Ornaghi has been the Principal Investigator in an ESRC funded research aimed at evaluating the impact of water metering on water usage and co-Investigator in an EPSRC funded research aimed at evaluating the impact of behavioural interventions on energy conservation in public offices.

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Relevant Sustainable Development Goal(s): SDG 6 (Ensure availability and sustainable management of water and sanitation for all) – targets 6.4; 6.5.

Evidence:

Water is a scarce resource. Managing water demand is increasingly important in countries confronted with constraints on water supply due to extended periods of drought, leaks in an ageing supply infrastructure and concerns about the environmental impact of water extraction. To this aim, in 2010 Southern Water launched a Universal Metering Program aimed at installing more than 400,000 meters in the South-East of England, an area classified by the government as under water stress. In parallel with the metering programme, Southern Water offered free water audits where trained advisors, known as Green-Doctors, offered advice on how to cut water consumption. As a result of this initiative, the company carried out more than 50,000 water audits and installed more than 165,000 water-saving devices - such as water-efficient showerheads and tap aerators - into some 46,000 properties.

We investigated the impact of those home visits and found that:

- 1) The information component of water audits (*i.e.* information provision on current water use, potential savings, and comparing water usage to similar households) had a large initial impact, but this was found to gradually fade over time, leading to a drop in consumption of less than 2% after 12 months.
- 2) On the contrary, the water-saving device contributed to an average reduction of around 5-10 litres per day, with an effect that was persistent over the full period of analysis, 18 months.
- 3) Devices reducing water pressure, such as shower heads and tap aerators, were particularly effective. Given that average households had two devices installed, this amounts to a drop in consumption of 2-4%. Our analysis shows that the use of water-saving devices is an effective measure to reduce water consumption and, in turn, to keep water bills and also energy bills affordable (as gas and electricity are used for hot water).

The findings on the limited persistence of information campaigns are in line with a larger body of research on this topic. In contrast, the results on the persistent effects of water-saving devices are new. It confirms results from engineering studies and goes a step further by taking into account not only the maximum amount of water that could be saved by a device, but also the behavioural effects of using such devices. Appropriately labelling of water using products would provide an additional boost to the uptake of more efficient products.

Recommendations:

Our findings provide crucial endorsement for the introduction of mandatory water efficiency labelling of items such as taps, showers, and toilets. Labelling should report clear information not only on the litres of water saved but also on the related financial gains for the households, over the expected lifetime of the products. Ideally, such information is also accompanied by a general statement about the benefits for the aquatic ecosystem and the environment. Labelling would push consumers to buy more environmentally friendly products and based on our results, we know that such purchases would have persistent impacts on water use.