

Growing up during a drought: What it taught about 'nudging' sustainability behaviors

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The need to understand how to encourage people to adopt more climate-friendly behaviors is pressing, but "nudging" people to adopt behaviors such as recycling, taking public transport, and reducing their

consumption of energy and water, is notoriously difficult. For example, the Behavioral Insights Team [failed to find an effect](#) of an advice and support campaign on energy consumption and interventions to reduce [single-occupancy cars](#), and more recently found that the most successful arm of a large trial to reduce household water consumption only reduced it [by 0.5%](#).

There are some well-trodden paths in this area: it is well known that [social norms](#) and social context are powerful influences on people's behavior—my colleague Professor Michael Sanders and I found enough to talk about here to [fill a book](#). A [number](#) of [well-conducted trials find](#) effects of social comparisons on water usage, with reductions in usage generally ranging around [2.5% or up to 5%](#). However, overall, the performance of "nudges" in conservation behavior have led scholars to [wonder](#): "Have behavioral sciences delivered on their promise to influence environment policy and conservation practice?"

But it is possible to apply behavioral science to sustainability with great effect.

Target 140

The drought in the 1990s and 2000s is still the worst on record in Australia. In 2007, Brisbane, Australia's third-largest city, experienced rainfall less than 10% of average levels, and experts projected that [water levels](#) in the dams would fall to below 6% if current rainfall levels and consumption patterns continued. With no prospect of the end of the drought, it would be necessary to reduce residential water consumption by another 13 percentage points.

However, structural and regulatory demand management measures had already been implemented, water restrictions were already irritating residents, and altering pricing further would have been highly regressive.

To achieve the water savings needed, people would need to voluntarily change their habits.

The Target 140 campaign, which referred to the goal consumption of 140 liters per person per day, ran for about eight months (April to December 2007) and was a stunning success. Over 2007, residents in South East Queensland voluntarily reduced water consumption to less than 129 liters per day.

Before the drought ended in 2008, dam levels had stabilized at around 16% of capacity, well above the crisis level predicted. In addition, despite the progressive lifting of the residential target, consumption remained below target, and below the level achieved by the regulatory measures.

Reducing people's water usage is classic behavior change problem — like smoking, exercise, studying and many others, the traditional policy levers can only take us so far. Beyond that, people need to choose to change their behavior. The success of the Target 140 water-use reduction initiatives can teach us a lot about what effective behavior change looks like.

People have to want to change

One reason why Target 140 was successful at generating immediate and sustained behavioral change was that it worked with residents' pro-social motivations. As Frank Mols and colleagues [have noted](#): "This campaign was highly effective because it [...] targeted people's identification as "Queenslanders."

In this way it redefined what it meant to be a good Queensland: a good Queensland saves water, and is "Water-Wise." The [advertising campaign](#) used images of dry dam beds in catchment areas to create a

sense of urgency, and images of gushing kitchen taps and showers to address the misconception that residential use didn't matter. This contrasted with the strict regulation of outdoor water use, which caused "restriction fatigue" and demotivation.

Pick one thing you want people to do

Making choices can be stressful and deplete psychological resources, resulting in either opting for the default or total inaction. Although it encouraged a range of water-saving changes, the government identified that the greatest gains could be made by reducing the length of showers: the typical pre-drought shower was seven minutes, which represented 33% of household water consumption.

Reducing showers to four minutes was the headline, and it was supported in a range of ways; over one million four-minute timers with [suction cups](#) to be mounted in the shower were distributed, and radio stations played four-minute "shower songs" throughout the morning.

Find where they're paying attention

Many interventions aimed at reducing energy and water consumption target the bill, hoping that this is a point when people are likely to be paying attention and open to adjusting their behavior. But the effects of these types of interventions are typically modest.

In Target 140, residents received information about their household performance against the target on their bills. However, the information campaign also reached into people's living rooms.

Water levels in the catchment area were reported nightly on the weather report, along with aggregate levels of per person consumption. This

served as a timely mechanism to feed back the impacts of residents' behavior on supply. According to Nicholas Gruen, "this 'feedback' of public data served to focus the community on the importance of water conservation and their own ability to take action." Successful campaigns target channels that are meaningful, not just channels that are easy.

To promote sustainable behavior we need to think big—and differently

Behavioral science has a crucial role in the race to protect the planet from the effects of climate change. However, given the struggle to go beyond modest effects of "nudges," it is right to wonder whether it has lived up to its promise in this area.

Target 140 shows that using tried-and-tested approaches such as social information on bills can be combined with innovative measures that make use of the levers of government to capture people's attention and quickly, meaningfully and durably change people's conservation behaviors.

Provided by King's College London

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