

SOCIAL DETERMINANTS OF DOMESTIC ENERGY AND WATER CONSUMPTION

overview of the project

The main objective of this project, led by the Australian National University, was to develop information on the socio-behavioural drivers of water and energy use in different dwelling types in Sydney. The research showed that most participants had a highly inaccurate perception of their energy and water use, and how this relates to average consumption rates across Sydney households.

A survey of over 2,000 residents and a series of focus groups were used to gather information. Most participants were aware of the programs and measures in place for water and energy conservation and stated that they would implement these as long as they did not impact on convenience and comfort in their home.

Reducing water and energy consumption in urban areas will reduce the environmental impacts on water catchments, reduce waste water and sewage output, and reduce air pollution and greenhouse gas emissions. This research is beneficial in estimating the impact of water and energy resource consumption based on dwelling type and may assist in making better planning decisions for Sydney in the future.



how the project was carried out

The first stage of the project was to develop a survey questionnaire with water and energy providers and select a sample of people from each dwelling type and subregion to be contacted. Dwellings were split up by building types - separate houses, semi-detached houses, flats under four storeys and flats of four or more storeys. Sydney was also divided into four sub-regions inner, middle, northern and outer, which aimed to capture demographic differences.

A phone survey of the sixteen sub-groups was conducted by AC Nielsen who collected data on the demographics of the household and their attitudes to energy and water consumption, pricing and conservation.

Following the survey, ten focus groups were conducted, involving 76 people recruited from the survey. These groups explored in more detail the behavioural and attitudinal aspects of water and energy use and conservation. The final stage of the project involved compiling the data to calculate average water and energy consumption rates for each of the sixteen sub-groups to compare with similar Census data.

outcomes now and in the future

The project showed that the type of dwelling does not appear to be a major factor in energy and water use and conservation. Higher density housing does not necessarily lead to more sustainable resource consumption, as previously believed. Cultural and socio-demographic factors seem to have a greater influence. Higher levels of education tend to increase the understanding of the impacts of consumption on the environment both in the short and long term and the willingness to make changes to conserve water and energy. The price of energy and water was less important to enhanced conservation. Better education programs

to change behaviour and attitudes are needed to ensure effective conservation, not just economic measures. Four papers have been submitted to academic journals to further promote the findings of this study.

The general perception of the public is that Government, businesses and industry do not have a strong interest in conservation and are wasteful with energy and water resources. The study recommends that these sectors need to demonstrate their own water and energy saving practices to encourage the public to increase conservation of water and energy resources.

benefits, challenges & lessons learned

The project has provided information to utility providers, the government and environmental planners on how social structure and the built environment determine water and energy consumption and conservation. It is hoped that the findings of this research will help lead to better planning outcomes for water and energy consumption and therefore improve the local environment.

The project had planned to gather individual water and energy consumption records to compare with the survey results, however due to privacy laws they were unable to obtain these records from the utility providers. This meant that this component of the research could not be undertaken.

Another issue for this project was that there were lower than expected response rates among residents in the higher density dwellings. This is reflective of renters and younger households in this kind of property and the high prevalence of mobile phone use in this demographic. The survey period needed to be extended by three months to get the required response rate in this sector.