



What is the Economic Value of Urban Heat Island Mitigation from WSUD?

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One of the main challenges to delivering accurate economic analysis of WSUD investments is the lack of economic data exploring some of the more intangible benefits that WSUD investments and policy prescriptions provide.

Perhaps chief among these intangible benefits of WSUD is its potential to reduce the Urban Heat Island (UHI) effect, whereby urban landscapes trap and store heat leading to higher peak temperatures and associated costs to society.

This project, undertaken for the CRCWSC, in collaboration with Monash University and E2Designlab, considers four policy scenarios relating to WSUD investments in greenfields developments:

1. No WSUD or IWM requirements;
2. Current regulatory settings for WSUD;
3. Proposed 'next stage' settings for WSUD; and
4. A targeted UHI mitigation scenario to achieve a desired cooling (e.g. 2 degrees on extreme heat days).

The analysis then:

- Measures how the settings translate to WSUD investments on-ground;
- Models the climate impact of the different settings; and
- Quantifies the changing economic costs associated with extreme heat produced in each scenario.

The outputs of the analysis is a quantification of the economic cost of UHI for each policy setting and therefore the economic value of UHI mitigation produced by moving from one setting to the next.

We understand this study to be world first, combining biophysical information, climate modelling and economic analysis.