



# Disgusting images lower support for Water Sensitive Urban Design

## Introduction

Images can be a powerful mechanism for engaging people with pro-environmental policy initiatives<sup>1</sup>, like Water Sensitive Urban Design. Yet, there is a dearth of empirical research establishing how images affect the extent to which people process and engage with environmental messages. Images are often highly emotive and dual processing theories suggest that emotions can have a flow on effect in term of how deeply people process or focus on the overall message contents<sup>2</sup>. Therefore, **this study assessed the effect of a discrete negative emotion, i.e., disgust, an emotion that can commonly be elicited by some images used in relation to stormwater management, on how community members respond to messages about stormwater management initiatives.**



## Methodology

For the online experiment, community participants (N = 232, 58% Female,  $M_{age} = 52.02$ ,  $SD_{age} = 16.30$ ) were randomly allocated to one of **two experimental treatment groups, i.e., an image that elicited either a high or low level of disgust (see Figure 1a and 1b), or to a control group (no image)**. Participants read the same communication message about sustainable urban stormwater management initiatives. **Depth of processing and how supportive participants were of water authorities implementing stormwater management strategies (policy support) was then measured.** Characteristics of the sample, such as their environmental identity were also measured. An environmental identity (Env ID) represents the extent to which some-one feels that they are an environmental friendly person.

## Results

Conditional pathway analysis showed that the direct effect of the images on policy support was moderated by environmental identity. As expected, for participants with a lower sense of environmental identity there was significantly less policy support when they were presented with messages accompanied by a disgusting image (point estimate: -0.16, 95% CI -0.32 to -0.01; see Figure 2) but the images did not have this effect for participants with a higher sense of environmental identity (point estimate: 0.11, 95% CI from -0.04 to 0.26) or moderate environmental identity (point estimate: -0.03, 95% CI from -0.13 to 0.08). Furthermore, the negative effect of the two image conditions on policy support was mediated by depth of processing, again only for participants with a lower sense of environmental identity (point estimate: -0.04, 95% CI -0.10 to -0.01); Point estimates for high and moderate environmental identity did not differ from 0. In other words, the disgusting images resulted in less policy support because participants paid less attention to the message.

## Key Finding

The results showed that images that elicit disgust have a negative impact on support for stormwater management policy for people who have less concern for environmental issues; a segment of the community that is often the target of environmental messages. The effect is partially explained by how deeply people process the message, such that the disgusting images led to participants paying less attention to the message, which led to lower policy support. **The results suggest the use of images that elicit disgust (e.g., stormwater drains and degraded waterways) should be avoided in communication messages designed to garner support for new stormwater management initiatives, such as Water Sensitive Urban Design.**

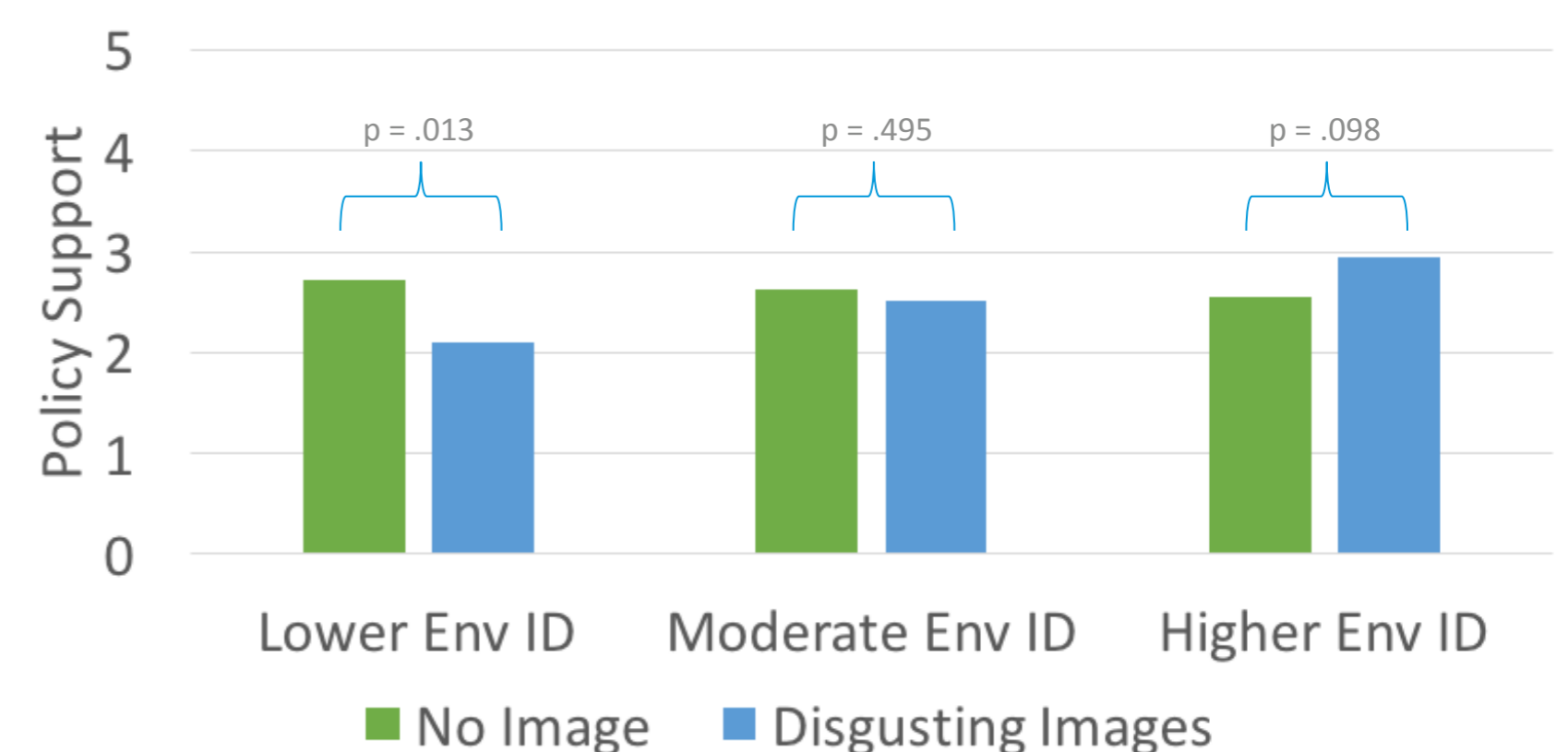


Figure 2: Policy support as a function of environmental identity and treatment group