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Sustainable water usage: Understanding willingness to use rainwater and recycled greywater at home

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Abstract

A potential path to protect freshwater resources is the combined use with other water sources such as rainwater and recycled greywater. Risk perceptions are a strong predictor of sustainable behaviour. Hence, the current study examines if perceived water scarcity now and in the future, influences individuals' willingness to reduce tap water consumption and increase the usage of rain and recycled greywater.

Via an online survey (n=2636) in a Western European country, the willingness to use of three different sources of water (freshwater, rainwater, recycled greywater) was assessed for a number of activities at the household level and tested whether perceived water scarcity now and in the future influences and moral obligation had an influence on the willingness to use various water sources .

The results revealed the willingness to use other sources of water depended on the activity associated to it, for instance, recycled greywater was often accepted for home cleaning or flushing the toilet; while rainwater was for cooking, showering. A linear regression analysis was used to test for the effect of perceived scarcity and moral obligation on the willingness to use each water source. Willingness to use greywater was significantly increased by moral obligation and perceived future water scarcity. Willingness to use rainwater was not affected by perceived water scarcity. Willingness to use freshwater was significantly decreased by moral obligation.

The willingness to adopt these sources of water is different depending on risk perception, moral obligation, it is also explained via socio-demographic factors (e.g., age).

Keywords: *water-usage, risk-perceptions, moral-obligation*