

Stability of environmental values in the event of natural disasters: the case of biosecurity and a catastrophic flooding in Southeast Queensland

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Abstract

This paper presents the results of the first natural experiment in the stated preference literature that tests for the stability of environmental values in the event of a catastrophic natural disaster. Two subsequent choice experiment surveys were conducted in Southeast Queensland, a region of the state of Queensland in Australia. The objective of the choice experiment study was to estimate households' willingness to pay for environmental biosecurity measures. The time interval between the two surveys was about six weeks. The second survey was launched two weeks after one of the worst flood events recorded in the state's history. The results of the experiment can be summarized into three key points. First, no statistically significant differences were observed in the proportions of choices made by respondents during the first and second survey in 16 out of 20 choice questions. Second, the dummy variable representing the order of the survey was not statistically different than zero in the scale-parameter adjusted pooled regression model. Finally, no statistically significant difference was observed between the mean implicit prices of the three environmental attributes included in the choice questions. We conclude that household preferences for biosecurity in Southeast Queensland are disaster-proof.

Key words: natural disaster, stated preference, preference stability, Australia, biosecurity, invasive species