

Public perceptions and preferences for environmental biosecurity in Southeast Queensland

Sonia Akter, Tom Kompas and Michael B. Ward

Abstract

The aim of the study was to understand public understanding of biosecurity and provide an estimate of the non-consumptive use and non-use benefits to be derived from enhanced biosecurity measures in the Southeast Queensland region. A public survey was conducted there during January 2011 using the choice experiment (CE) technique of non-market environmental valuation where 400 households were interviewed using fully structured survey questionnaire. Apart from increased household expenditure, three environmental attributes, namely, the number of threatened plant and animal species, area of landscape and water bodies covered by weeds and chances of invasive biting insects in the backyard and outdoor recreation areas, were included in the choice questions.

About a quarter of our sample never heard of the terms 'invasive species' and 'biosecurity' before the survey and they attached relatively low levels of importance to invasive species threat in comparison to other competing environmental threats facing the region. However, the majority of the respondents believed that the threat posed by invasive species to the environment will increase over the next 50 years and they were willing to sacrifice a proportion of their income to promote corresponding biosecurity management actions to reduce the threat. Respondents were willing to spend A\$21 per

year to save one native plant or animal species from the threat of non-native invasive species. Respondents' willingness to pay to eliminate weed cover from one percent of landscape and water bodies is A\$6 per year. Respondents' average willingness to pay to reduce the chances of invasive biting insects being established in their backyard and outdoor recreation area was found to be increasing at a decreasing rate. They were willing to sacrifice A\$110 per year to reduce the chances from high to medium. Their willingness to pay declines significantly (A\$45) to reduce the chances from medium to low.

On average, sampled households were willing to bear between A\$72 to A\$147 per year to support changes to the existing biosecurity measures. As economic theory predicts, household support for the changes in biosecurity policy varied negatively with its potential cost. At a relatively lower level of cost, more households were supportive of the policy. The support for the policy declined as cost increased.