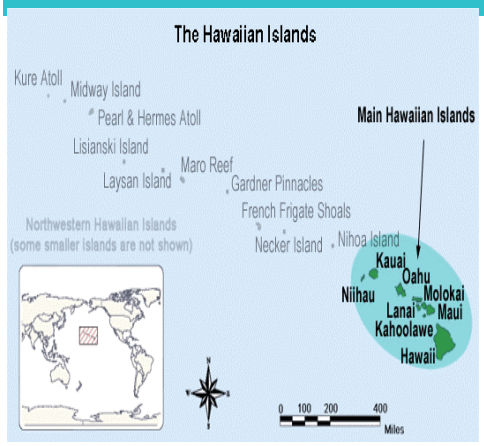

Main Hawaiian Islands

J.E. Smith

Schools of fish live near reefs

James Watt, Ocean Stock, Inc.

A variety of shallow coral

Socioeconomic Factors Significant in Explaining Total Economic Value

Introduction

There were only seven socioeconomic factors that were statistically significant in explaining differences in willingness-to-pay (WTP) for protection or restoration of the coral reef ecosystems around the Main Hawaiian Islands (MHI).

Common socioeconomic factors such as age, sex and race/ethnicity were not significant factors in explaining differences in WTP for protecting or restoring the coral reef ecosystems around the MHI.

The seven socioeconomic factors that were statistically significant in the estimated valuation model are listed in Table 1 along with the marginal effects in changes in WTP for ecosystem-wide protection and restoration and restoration of localized injuries for changes in the socioeconomic factors. Seven factors were significant for WTP for ecosystem-wide protection and restoration, while only five of the factors were significant for WTP for restoration of localized injuries. Educational Attainment and Household Income were not significant factors for restoration of localized injuries.

The base value or the average WTP per household per year is the estimated value without adjusting for socioeconomic factors. For ecosystem-wide protection and

Table 1. Changes in WTP for changes in Socioeconomic Factors

	Ecosystem-wide Protection and Restoration ($/Household/Year)	**Restoration of Localized Injuries** ($/Household/Year)
Base Value	**$122.48**	**$35.41**
Socioeconomic Factor	Change in WTP[1]	Change in WTP[1]
1. Educational Attainment (one level increase – 7 levels)	+$24.63	Not significant factor
2. Married and Own a Home	-$89.38	-$83.81
3. Strong Environmentalist	+$345.88	+$256.38
4. Very Strong Environmentalist	+220.31	+$147.32
5. Probably Will or Definitely Will Visit Hawaii in next 10 years	+$166.47	+$166.49
6. Number of times ever visited a Coral reef anywhere in the world (each additional visit)	+$3.37	+$3.14
7. Household Income (average $64,196)		Not a significant factor
1% increase	+0.22% or $0.27	
10% increase	+2.22% or $2.72	

1. Change in willingness-to-pay (WTP) for change in socioeconomic factor.

restoration, this is estimated to be $122.48 per household per year and for restoration of localized injuries $35.41 per household per year (table 1). Once adjusted for all socioeconomic factors the average WTP for ecosystem-wide protection and restoration was estimated at $224.81 per household per year and $62.82 for restoration of localized injuries (See fact sheet on estimated values or chapter 8 of the main report).

Changes in WTP for Protection and Restoration and Socioeconomic Factors

Being a strong or very strong environmentalist were the most important factors in explaining the differences in WTP for protection and restoration of the coral reef ecosystems around the MHI. Being a strong environmentalist has a high positive effect on WTP for protection and restoration.

Direct use or future direct use of coral reef ecosystems also had positive impacts on WTP for protection and restoration. Direct users of coral reefs have higher values than passive users. For respondents that either probably will or definitely will visit the coral reef ecosystems around the MHI in the next 10 years, it increased average WTP by $166.47 per household per year for ecosystem-wide protection and restoration and $166.49 for restoration of localized injuries. The number of times a respondent had visited a coral reef anywhere in the world also had a positive effect on WTP for protection and restoration. For each additional visit a person has made, they were WTP $3.37 more per household per year for ecosystem-wide protection and restoration and $3.14 more per household per year for restoration of localized injuries.


John Davies

Sea urchins are common in Hawaii

Educational attainment and Household Income were also positively related to WTP , but only for ecosystem-wide protection and restoration. The higher the level of educational attainment or household income, the higher the WTP for ecosystem-wide protection and restoration. For education, a one level increase in educational attainment increases the average households WTP for ecosystem-wide protection and restoration by $24.63. For household income, the income data was first converted to continuous dollar amounts by setting the income equal to the mid-point of each income interval (see demographic profile fact sheet or chapter 6 of the main report). The average household income of the sample of respondents was $64,196. From the estimated valuation model, the income elasticity of WTP was estimated at 0.22 meaning that for every one percent change in household income, WTP for ecosystem-wide protection and restoration increases 0.22%. Applying this to the base value of WTP for ecosystem-wide protection and restoration ($122.48, table 1) yields an estimate of $0.27 in the increase in WTP for ecosystem-wide protection and restoration for a one percent increase in average household income. Similarly, a 10 percent change in household income would increase WTP for ecosystem-wide protection and restoration by $2.72 per household per year.

The only socioeconomic factor that was negatively related to WTP for protection and restoration was whether a respondent was married and owned a home. For those who are married and own a home, they were on average WTP $89.38 less per household per year for ecosystem-wide protection and restoration and $83.81 less per household per year for restoration of localized injuries.

For further study results, see other fact sheets or the main report at the following url:
http://coralreef.noaa.gov/hicoraleconval/
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