

## **VALUE OF COASTAL ECOSYSTEM: WHY AND HOW CITIZEN'S PREFERENCE MATTER**

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Prevention of oil spill, and therefore averting the damages to coastal ecosystems, undoubtedly confer a benefit to the society. However, the benefit is difficult to be recognized because of priceless nature of the environment; it is not sold or bought in the market place. Public decision-making without the recognition of environmental benefit will unfortunately lead to the distorted allocation of scarce resources.

Environmental economists have developed various methods to estimate the benefit of environmental protection so as to help public decision-makings. In this study, we apply Conjoint Analysis, one of such methods, to the protection of coastal ecosystem in Tokyo Bay from damages caused by oil spill. The details of the damage are four kinds. 1) The number of beach and recreational fishing sites polluted by the spill ("recreation" attribute), 2) the number of people affected via the smell of oil and resulting dizziness ("health" attribute), 3) the tideland area affected ("tideland" attribute), and 4) the number of commercial fishing ports affected ("fishery" attribute). We found citizen's willingness to pay for "tideland" attribute is not tiny, compared to other attribute.

We also examined an experiment to consider the nature of money measure in the stated preference survey. Stated preference survey usually asks people about the tradeoff between money and goods: how much you are willing to pay to obtain goods. If we could ask on the tradeoff between goods and goods, would it be a good alternative to monetary valuation? This study compares those two approaches, monetary valuation and "in kind" valuation through a choice experiment type of Conjoint Analysis on oil spill prevention program in Tokyo Bay. We prepared four types of questionnaire: (1) with the attribute of monetary payment in the profile, (2) without the attribute of monetary payment, (3) with the attribute of monetary compensation (4) without the attribute of monetary compensation. The result shows fairly stable marginal rate of substitution between goods across different types of questionnaire, while large disparity is found between monetary payment measure and monetary compensation measure.