



The social cost of coastal erosion. Using cultural theory to enrich the interpretation of stated preference data.

A. Kontogianni, C. Tourkolias, M. Vousdoukas, and M. Skourtos
University of Aegean, Faculty of the Environment, 81100 Mytilini, Greece

Natural coastal processes are to a great extent modified by proximity to man-made structures. Engineered interventions, port facilities, housing and industrial infrastructure, all can increase the coastline fluctuations significantly relative to those along a long unobstructed coastline. As a consequence, coastlines are increasingly exposed to coastal erosion, a phenomenon defined as the encroachment of land by the sea after averaging over a period, which is sufficiently long to eliminate the impacts of weather, storm events and local sediment dynamics. In order to provide cost effective management of coastal erosion it is crucial to estimate both the benefits and costs associated with various management alternatives. The initiatives on Integrated Coastal Zone Manegment in Europe, but also the upcoming Marine Strategy Framwork Directive would benefit greatly from a proliferation of socioeconomic information to assist decision makers who must weigh the impacts of various types of coastal improvement and the cost of beach protection/restoration. In that spirit, the objective of the present research is to report the results of a survey undertaken in two resort beaches on the island of Lesbos (Greece), designed to estimate public preferences for avoiding coastal erosion. A mixed methodological approach is employed by combining an open-ended contingent valuation survey with cultural theory of risk perception. The empirical models to analyze individual choices of erosion control programs and the associated welfare measures are presented, followed by the discussion of model specification and estimation issues, and the results of the data analysis. Some concluding remarks are then presented. By choosing this approach we aim at improving our understanding of preference structure for avoiding public risk, accepted level of risk and perceptions thereof. The framework can also be used for assessing the social cost of extreme weather events such as storm surges in the coastal zone, to get an insight for insurance values.