Woods Hole Sea Grant: 1994-1996 Projects

Public Risk Perception and Coastal Flood Insurance

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Coastal storms, sea level rise, and erosion represent continuous threats of flood damages to coastal residents. To date, most attention of storm and flood impacts has been devoted to monetary damages to residential and commercial properties. Flood risk as perceived by the public has not been systematically investigated, despite the fact that the public's perception of risk significantly influences policy decisions. If the risk of coastal flood as perceived by the public significantly deviates from flood risk estimated by scientists, policy makers need to decide how to weigh public risk perceptions or those of scientists in making coastal management policies. This Sea Grant-supported economic analysis will estimate the flood risk perception of coastal residents, compare these perceptions with those of expert scientists, and measure how individual socio-economic characteristics and flood risk information influence the public's willingness to pay to insure against future flood damages. The results of this project will determine the importance of public risk aversion and lead to better risk communication between the public and scientists and, as no systematic information about public perception of coastal flood risk currently exists, the results will be of use to local, state and federal coastal resource managers.

An Optimal Risk Sharing Strategy for Marine Oil Transport

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Under the Oil Pollution Act (OPA) of 1990, oil carriers effectively face unlimited liability in U.S. waters. Attempts by the U.S. federal government to implement regulations in keeping with OPA 90 have led to an impasse as the established marine insurance industry refuses to back certificates of financial responsibility under OPA 90. All tankers coming into U.S. ports must have such a certificate. Under this project, researchers will develop an analytical model, based on economic theory and a review of relevant factors in environmental law, damage assessment, and marine insurance, to determine the optimal level of risk sharing (liability limits) in marine transportation of oil. Also, researchers will apply the model, using empirical data on oil transport markets and spill damage assessment, to develop preliminary guidance regarding an optimal liability limit. This study will provide analytically defensible suggestions for an economically optimal level of liability to help resolve this impasse.

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