

# Willingness to pay for beach recreation and coastal protection

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The purpose of this study was to estimate the willingness to pay for the recreational benefits of beaches with coastal erosion protection. The analysis was based on a first stage hedonic house prices study using a difference-in-difference approach. The analysis covered a large section of the Danish coastline and more than 20.000 house sales during the period between 2005 and 2015. The value of both hard and soft coastal protection solutions were estimated e.g. rock groynes, wave breakers and beach nourishment. The coastline in the analysis was inspected and classified based on aerial photos. These classifications entered into the hedonic models along with the different coastal protection solution at the nearby coastline.

We found that the value of the coastline can be traced out to one kilometer from the coastline. The value increases exponential with the access to the coastline. First, second and third row properties were found to have an additional positive effect of the coastline. The class of coastline was also found to have a significant effect on the property value, i.e. rocky beaches were found to depress property prices by a considerable amount compared to sandy beaches. Beach nourishment was found to increase recreational value in coastal areas where the treatment resulted in more sandy beaches. Hard solutions were largely found to be endogenous and highly correlated to rocky beaches, essentially making them spatially and econometrically inseparable.