

Beggar-Thy-Neighbor's Beach: Pricing Adaptation to Sea-Level Rise

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Abstract : With the accelerated sea-level rise (SLR) increasingly becoming a concern, demand for coastal management and protection is expected to grow. Among the coastal management and protection methods, building seawalls are among the most controversial due to the negative externalities they impose on beachgoers and neighboring properties. This paper provides estimates of the external cost associated with building seawalls on the island of Oahu in Hawaii. Using hedonic pricing approach on real properties sold between 1980-2010 and aerial photographs of seawalls in 1995, the paper finds that (1) while seawalls do increase the value of protected properties, the share of armored properties appear to be negatively correlated with property sale prices, suggesting that the positive effect of seawalls tend to decline as more and more rely on this coastal management method; and (2) the value of beachfront properties tend to decline as they get approach seawalls. Results suggest that policymakers should devise a policy that would internalize the externalities associated with private-sector adaptation to climate change.

Keywords : private sector climate change adaptation, externalities, sea-level rise, hedonic pricing

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