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Further Reading:

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Read More About: The [Socio-Economic Marine Research Unit Cluster \(SEMRU\)](#) within the Whitaker Institute for Innovation and Societal Change

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Investigating public demand for blue-green infrastructure

Flood reduction infrastructure is a vital aspect of many urban and peri-urban areas. To date, the majority of flood reduction projects use traditional “grey” materials and techniques. However, the use of blue-green infrastructure (BGI) such as, restoration of floodplains or wetlands and bioswales are becoming more popular. The move towards BGI is, in part, due to the additional ecosystem service benefits delivered through BGI in comparison to traditional grey infrastructures. Commonly for flood reduction BGI, these benefits include water purification, increased biodiversity, habitat protection or restoration and improved scenic quality. Although these additional benefits are well documented little is known about resident’s preference for BGI compared to traditional grey infrastructure when both provide the same level of flood protection.

Research Findings

Data were collected from residents of the Carlingford Lough catchment, located in county Down and county Louth, using a household survey. A split sample methodology in combination with a discrete choice experiment was used to compare resident’s willingness to pay for BGI or grey infrastructure to combat existing flooding issues. Within the discrete choice experiment the respondents were presented with various levels of habitat protection, water quality, flood prevention and cost. Each of the split samples were presented with the same levels of these attributes, however, one group was informed that these changes would be delivered through a BGI and the other group was told these changes would be as achieved using traditional grey infrastructure. A random parameter logit was fitted to the data.

The results reveal that the respondents had a positive preference for each of the attributes. The highest willingness to pay, for the average respondent, was for water quality that allowed for primary recreational activities such as swimming. The average respondent was willing to pay £33.77 per year for this improvement. However, for those living in a flood prone area, their willingness to pay for flood prevention services that would reduce flooding events from once every 5 years to once every 25 years was higher at £34.84 per year. In comparison to those presented with the grey infrastructure solution, those presented with the BGI solution were more willing to pay for improvements to the catchment.

Policy Implications

The estimated model demonstrated a preference for BGI solutions in the Carlingford Lough catchment. Current policies tend to perpetuate the use of grey infrastructure. These new results suggest that policy should aim to break from these old grey solutions to more beneficial BGI. New policy should actively promote the use of BGI as a cleaner more efficient and more desirable method of reducing flood risk. There may also be a need to up skill relevant policy makers and managers so that they are as knowledgeable about BGI as they are about the methods they are currently using.