

Science for Environment Policy

The social value of flood alleviation

Climate change is predicted to increase the frequency and severity of flooding in coming years. For more effective flood alleviation, this study recommends schemes that consider the social impact of floods as well as the economic damages.

Climate change increases intense rainfall and raises sea levels, both of which increase the risk of flooding. Between 1998 and 2009, Europe experienced over 200 major floods, causing 1126 deaths, the displacement of around half a million people and over €50 billion in economic losses. In the years to come, the damage is likely to increase. According to some estimates, flood damages across Europe could increase by 200% by the end of the century.

Flood alleviation schemes are therefore vital. Existing schemes are driven by technical and economic considerations, often based on cost-benefit analysis, which weighs up the costs of flood alleviation against its anticipated monetary gains. While useful for providing an easily accessible analysis of a scheme, this approach does not take into account less quantifiable factors, like social values.

There are several different types of social value; economic forms which include the social benefits to an area and the positive impact these may have on the local economy, and less tangible types including quality of life and community safety. Social values indicate what is important to a local community and can aid the development of effective flood alleviation schemes that satisfy all stakeholders.

To support a more socially considerate approach to flood alleviation, this study examined the perspectives of different stakeholders, including local community members and members of a flood alleviation scheme's design and construction team.

The researchers focused on a flood alleviation scheme based in Ripon, a city in the north of England vulnerable to flooding. They conducted semi-structured interviews with 26 people between October and December 2013. While the majority were members of the local community, some were employees of the Environment Agency (the body responsible for flood management) and members of the design team for the flood alleviation scheme.

During data analysis, local community members were divided based on their experiences of flood events. The researchers divided the community into two groups: those who had been victims of flooding, and those who had not personally experienced flooding but were affected by the scheme.

The results revealed contrasting perceptions. For example, most local residents — especially those who had been directly affected by flooding — thought of social value in terms of community-wide and non-financial values, such as peace of mind and social inclusion. By contrast, community members who had not been victims of flooding were more likely to consider the economic aspects of the scheme. Similarly, many industry participants primarily defined social value in economic terms, such as a positive effect on employment and tourism.

Although there were varying perceptions of social value, the study clearly shows its importance within flood alleviation. The existing processes dictating how flood alleviation schemes are developed in the UK, and several other European countries, do not consider social value, an approach that risks neglecting the needs of local communities. The authors recommend a change to consider the different perceptions of social value in the design and implementation of flood alleviation schemes.

This research is part of a larger study including an additional two flood alleviation schemes in the UK. Looking ahead, the authors suggest their method could be applied across countries and continents in order to develop an international understanding of the social value of flood alleviation.



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