

CASE STUDY

Present and Future Flood vulnerability, risk and disadvantage: A workshop to test theories between communities at risk and their levels of flood resilience.

Background

The report, 'Present and future flood vulnerability, risk and disadvantage: A UK assessment' by Sayers and Partners for the Joseph Rowntree Foundation, highlights how floods interact with social vulnerability across the UK to create flood disadvantage, an issue which will be exacerbated by climate change. The report and its associated data can be found at <http://www.sayersandpartners.co.uk/flood-disadvantage.html>

Some 6.4 million people live in flood prone areas in the UK, with around 1.5 million of these living in vulnerable neighbourhoods (which include people on low incomes, with poor health and other factors that mean that floods are likely to have increasingly severe impacts). Sayers et al (2017) reported that over 50% of the population exposed to flooding in the most vulnerable neighbourhoods can be found in just ten local authorities. Furthermore, the number of people living in flood prone areas is set to increase to 10.8 million people by the 2080s, assuming a future scenario of high population growth and a 4C° increase in temperatures due to climate change.

The report highlights a series of recommendations for policymakers including:

- Adopt new indicators to highlight the risks faced by the most socially vulnerable (including a new Neighbourhood Flood Vulnerability Index (NFVI), a Social Flood Risk Index (SFRI) and a measure of Relative Economic Pain (REP).
- Use these new indicators to better target support for the most socially vulnerable in flood investment decisions.
- Ensure flood risk management policy actively supports inclusive growth.
- Better reflect the disproportionate long-term flood risks faced by vulnerable neighbourhoods in national and local planning policy.

Purpose of the Pilot

This pilot aimed to test the outputs of the 'Present and Future Flood vulnerability, risk and disadvantage' project to establish if they can be used in a practical way at a local scale to help target flood risk management interventions with disadvantaged communities. In doing so, it considered:

1. Does the output data from the Present and Future Flood vulnerability, risk and disadvantage' project make sense?
2. Is the methodology tested in the workshop a useful approach that can be replicated?

Mapping and the Workshop Approach

Pilots in Rochdale and Kent were selected to test these questions, as these correspond with areas identified in the report as suffering particular flood disadvantage – cities in economic decline, coastal areas and places where capital schemes are unlikely to meet cost:benefit criteria for flood risk management schemes. Half day workshops were held in each area. The workshops brought together data used in the Sayers et al report from the University of Manchester, local data on flood risk and social indicators, and local knowledge from both a flood risk management and a social perspective to consider how it could support targeting of local responses.

During each workshop, newly analysed data sets from the University of Manchester were presented. The data provided by the University of Manchester was in an excel format. For these data sets to be utilised effectively in both workshops it had to be transformed into visual maps. The National Flood Forum took the Excel spatial data and joined it with Ordnance Survey maps in the open source mapping software 'QGIS'. The data was mapped at the Lower Super Outputs Areas (LSOAs) scale.

During both workshops the mapped data proved to be an essential discussion starter regarding flood disadvantaged communities. However, participants highlighted a number of problems including: the data being outdated due to its census origin, crucial datasets had been left out of the analysis (i.e. mental health problems, owner occupiers, unregistered for housing, transient populations and populations within prisons) and the data generalised smaller communities due to the descriptive legends and the lack of finer scaling.

Recommendations

1. The methodology outlined in this report brought practitioners together from different sectors to discuss flood disadvantage, using the data from Sayers et. al. 2017 to generate discussions. It demonstrated that the approach of combining data with local knowledge and skills provides a much more informed discussion about flood disadvantage than using data alone.
2. Decisions regarding the targeting of flood risk management or resilience measures locally should not be based solely on data from the Sayers et al (2017) report. A holistic approach is needed that includes local data and knowledge from a wide variety of sources.
3. The scale of data presented in the Sayers et al (2017) report was useful as part of a scoping exercise, helping to generate discussions on a range of flood disadvantage issues. However, it was not sufficiently detailed to base decisions on. It is recommended that additional finer scale data should be included to help inform discussions, including the ability to explore how sub-group characteristics, or the relationships between variables, differ between localities.
4. Some of the data presented in the Sayers et al (2017) report was outdated due to its nature and origin. Particular datasets were found to be misleading and not a true representation of reality, because changes had occurred since the data was collected, therefore representatives found it difficult to use the information. It is recommended that the data should be used in conjunction with other current sources of data and local knowledge held at the local level.

5. The workshop approach brought practitioners together from different sectors to discuss flood disadvantage. This was key in furthering the discussion and identifying socio-economic drivers for flood disadvantage at a local scale. However, it is recommended that this methodology is developed further to increase the participation of local representatives from non-governmental organisations.
6. It was clear during discussions that some issues that representatives raised were sector specific. For example, social renting, caravan sites and insurance. The workshop methodology used in this project could be used to identify and start to address such sector specific issues in relation to flood disadvantage.
7. The Isle of Sheppey Pilot demonstrated that vulnerability and flood disadvantage existed in the area and that there were a lot of small scale projects needed that would potentially never get funding. The pilot approach could therefore be used to identify where need exists in areas such as this and to help target interventions, such as supporting the development of flood action groups.

Conclusions

The project used data from the Sayers et al (2017) report and a workshop methodology to test whether the data is a true representation of the flood disadvantage of communities on the ground; as well as testing whether the workshop methodology is an approach to identifying flood risk management and potential resilience mitigation activity in such communities. The workshop methodology proved successful in bringing together partners from different sectors to discuss community flood disadvantage in both Rochdale and the Isle of Sheppey. The workshops enabled participants to share sector specific issues, share current projects that are being undertaken in communities that are tackling aspects of vulnerability and enabling cross sector projects to be developed that produce multiple benefits to a community.

During both workshops participants identified shortfalls with the data in truly representing vulnerability factors at the community scale. The main finding from this pilot was that decision making regarding the targeting of flood risk management activities in disadvantaged communities, should not solely be driven by data. This report has demonstrated that the approach of combining data with local knowledge and skills provides a much more informed discussion about flood disadvantage than using data alone. Therefore, this report has outlined seven recommendations for furthering the methodology used in this pilot to ensure that holistic and inclusive decisions are being made regarding the targeting of flood risk management activities in disadvantaged communities. It is thought that this refined methodology could be utilised by all sectors across the UK to identify flood disadvantaged communities and future interventions.