



This is a peer-reviewed, final published version of the following document and is licensed under All Rights Reserved license:

Hafferty, Caitlin ORCID logoORCID: <https://orcid.org/0000-0002-4512-1338> (2019) Engaging communities in the sustainable management of river environments. Salmo Trutta. pp. 74-77.

Official URL: <https://www.wildtrout.org/>

EPrint URI: <https://eprints.glos.ac.uk/id/eprint/6846>

Disclaimer

The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.

Engaging communities in the sustainable management of river environments

Caitlin Hafferty's study explores the dynamics of community-led river management initiatives as part of wider research into public participation in environmental decision-making

Last year, I carried out a small-scale study for my Masters dissertation in the School of Geography and Planning at Cardiff University, which was intended to inform my current PhD research at the Countryside and Community Research Institute. Coming from a background in human geography and the social sciences, this study was ultimately designed to effectively capture and represent the complex relationships between humans and the natural environment. The central aim of this project was to investigate how an increased understanding of people's engagement with managing and protecting their local river might contribute to more informed decision-making regarding public engagement in environmental management. This article provides a brief overview of this dissertation project, focusing on the methods used to collect key information and the presentation of the main findings of the study.

This study focused on one specific case study: the small, rural town of Bruton in South Somerset, which is host to an active community-led river management group the 'BrueCREW' (named after the town's River Brue). Despite being one of the smallest towns in England (with a population just short of 3,000), Bruton boasts a vibrant community, a rich variety of local businesses and a strong arts culture - all situated around the river, which runs directly through the centre of town before it is joined by



The historic Packhorse Bridge on the River Brue

Combe Brook, then the River Pitt, and finally the River Alham. The BrueCREW river management group is a community-led organisation and registered charity, which aims to restore the natural balance of Bruton's stretch of the River Brue for the benefit of both wildlife and the local community (visit www.bruecrew.org for more information). The original idea for setting up a river group was initially raised by the local town council, and encouraged by members of the community who considered the river to be an important feature of the town and felt that they should have a say in how it is managed and protected. Central to the success of BrueCREW is the guidance provided by Somerset Wildlife Trust and the Wild Trout Trust, and the experienced and enthusiastic members of Bruton's local community.

To explore the dynamics of community engagement with managing the river, a series of in-depth interviews were carried out with both members and non-members of the BrueCREW. The aim of these interviews was to gain a deep understanding of river perceptions and experiences from a specific subgroup of the community and 'expert' stakeholders in river management. To collect the data, an innovative method called "mobile interviews" or "talking whilst walking" was carried out, which occurs by walking around the physical setting of the river environment. The idea is that conversations are more likely to relate to specific characteristics of the environment, therefore providing contextualised information and highlighting a range of issues relevant to environmental policy, planning and natural resource (water) management. These interviewing methods are arguably preferable over traditional "sitting-down" interviews (e.g. at a person's home or other indoor setting) mainly because they help to provoke more spontaneous reactions to the environment based on where we are walking at the time ("oh, look - here is a really interesting/important part of the river, because...").

Importantly, these interviews were also tracked by a GPS application (on a smartphone) alongside an audio recording (also on a smartphone) and photographs of important features of the river. All these components were linked up to produce a form of "visual map", which is arguably more effective than more traditional methods of collecting and displaying interview data as one can see what someone said about the river, exactly where they said it, and a photograph of what it was. These methods ►



The 'stepping stones' are a popular spot for residents and visitors of Bruton

are easily carried out to visually and creatively represent and share information about the environment, which may be particularly useful to groups wanting to map the stretch of a river alongside detailed information about key features and environmental issues.

Analysis of this interview data provided some unique and detailed insights into the workings of community river management groups, using the BrueCREW as an example. Significantly, interviews helped uncover some of the features of the river which were most valued by the community, and also some of the main issues experienced regarding the quality of the river environment and efforts to protect it. This information was displayed on maps relating to each river 'theme' raised by interviewees (i.e. the issues mentioned most frequently). The red line on the map marks the route taken on the walking interview along the river (with a green square marking the starting point of the walk, and red marking the end) and shows where we paused and walked towards particularly interesting features (zigzags in the route). To provide an example of this, the map shown here titled "Issues with the natural environment" shows all the key features mentioned which highlighted issues with the general quality and health of the river environment.

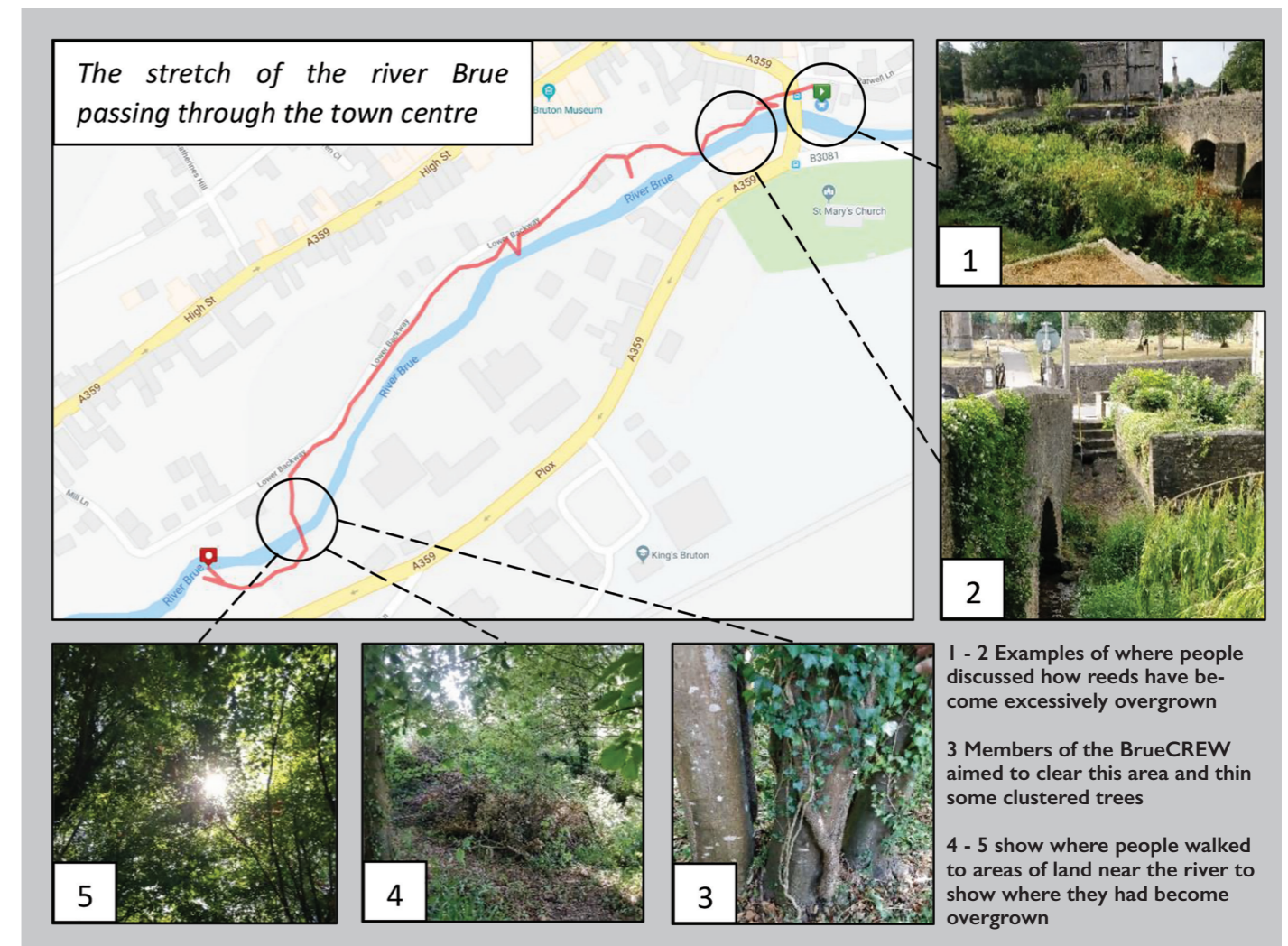
These issues were summarised effectively by one Bruton resident: "People want to spend time in a healthy river

environment with rich biodiversity - it's a shame to see neglected and overgrown environments with little or no visible wildlife."

People frequently mentioned the importance of the river for both humans and wildlife, including maintaining a healthy, attractive and accessible river environment, managing invasive species, some concerns about erosion, pollution from farmland run-off, and flooding. On the map shown, photographs 1 and 2 provide examples of where people discussed how reeds have become excessively overgrown - not only restricting access to the river for the community's enjoyment, but making it harder for fish to pass through and preventing light from penetrating the water. The steps shown in photograph 2 used to be completely overgrown, however the BrueCREW successfully organised a community reed-pulling event to increase access to the river. Overgrown vegetation often included Himalayan Balsam, an aggressively invasive flowering plant which spreads quickly (its explosive seeds moving both up and downstream), altering the ecological balance and character of wetland habitats. Similarly, photographs 4 and 5 show where people walked to areas of land near the river to show where they had become overgrown with brambles and where the overgrowth of trees has led to a thick canopy, letting very little light pass through. This not only affects the biodiversity of the flora and fauna below, but discourages people from accessing a beautiful section of the river for leisure and recreation purposes. Members of the BrueCREW aimed to clear this area and thin some clustered trees, also removing ivy from some (photograph 3) which can be detrimental to tree health.

The same 'visual mapping' method was used to represent the dynamics of community-led river management, including details of how the river management group was formed (getting funding, seeking advice, etc.); the activities which they typically engaged in (physical activities, public engagement and environmental monitoring); features of the river which were most valued by the local community (such as riverside walks and seating areas which increase access to the river and help bring the community together); and the barriers and motivations experienced by individuals in becoming actively involved in the sustainable management of their river environment.

Through the use of mobile interviewing methods and creative "visual mapping" techniques, this pilot study



Issues with the natural environment Source: Hafferty (2018), displayed on Google Maps.

was able to produce a more informed understanding of community engagement in river management which was representative of people's perceptions, attitudes and values associated with a particular river environment. These methods and approaches to researching public participation in natural resource management will be built upon and improved in an ongoing PhD project in mixed-methods mapping using Geographic Information Systems (GIS) technology. One key message from this smaller study holds relevance for policy decision making – if environmental planners, managers and decision makers engage with the public and incorporate the knowledge, understandings, values and meanings associated with a specific environment, then policies and practices can evolve to become more effective. Instead of exclusively relying on 'expert' knowledge in a top-down approach to the management of the natural environment, approaches can incorporate valuable local knowledge to become more informed, focused and targeted to specific issues. □

Acknowledgements: This study was conducted for a Masters degree dissertation in the School of Geography and Planning at Cardiff University, under the supervision of Dr Scott Orford (Reader in Spatial Analysis and GIS). I am grateful to the residents of Bruton and environmental experts who gave up their time to participate in this study. Also, thanks and credit to Ruairi Hafferty Hay for capturing the photographs of the Brue used in this article. **About the author:** Caitlin is a first year PhD researcher at the Countryside and Community Research Institute. Her research is funded by the Economic and Social Research Council (ESRC), and focuses on public participation and the use of Geographic Information Systems (GIS) technology in environmental decision-making and natural resource management. This project works closely with the Upper Thames Catchment Management Project in Gloucestershire, and involves a variety of local and non-local stakeholders. For any questions or further information, please contact caitlinhafferty@connect.glos.ac.uk.



The BrueCREW river management group aims to restore the natural balance of Bruton's stretch of the River Brue for the benefit of both wildlife and the local community