

## B8. Sustainable development, student volunteers and community engagement with flood histories and flood risk

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This case study evaluates the benefits of active learning through student volunteering within a live project with a sustainable flood risk management focus. Despite significant investment in awareness raising campaigns by the Environment Agency, community awareness of local flood histories and flood risk (two separate but related elements) is frequently low (see Scott Wilson Kirkpatrick Ltd *et al.* 2003 for discussion of main issues surrounding public perception and understanding of flood risk in UK). Community awareness of local flood risk in a climate change context is an important element of 'place' and local heritage, as is a shared memory of past floods and their impacts. The driver for the live project was capacity building to promote greater community engagement with local flood histories and flood risk through a 'public understanding of science' approach. The activity was led and managed by the author and facilitated through staff and students at the University, working alongside community members.

The *Lower Severn Community Flood Information Network* project was funded primarily by the Royal Society's 'Connecting People to Science' Scheme with additional funding from the Environment Agency. The involvement of undergraduate and postgraduate student and community volunteers was a key element of the project.

### **Aims**

The overarching aims of the project are:

- To promote active community engagement with past, present and future local flood histories and risk, based on sound scientific evidence, as an important part of living on the lower Severn floodplain
- To encourage an informed community understanding of flood risk, of flood probabilities and of issues associated with living with uncertainty,

through development of 'local knowledge' of historic floods and extended awareness of local flood impacts. This flood awareness will be placed within a longer-term environmental change context

- To facilitate opportunities for community participation in engaging with the science of flood risk from the perspective of 'communicating science' to and among local communities through both real and virtual discussion
- To develop a model of excellent practice in science communication through informal or unofficial networks and communication routes in engendering local community ownership of flood risk
- For the student volunteers, to provide a variety of interesting active co-learning opportunities in their direct engagement with floodplain communities about local flood histories and understanding of local flood risk issues.

There is therefore opportunity for students to reflect critically on the links between theory and practice in flood risk and its management whilst the project also provided opportunities for distinctive personal skill development that cannot easily be secured at the University. The latter included oral skills in engaging effectively with different community members in potentially sensitive settings, as well as working and networking with a wider community. This included tutors, community members and organisations.

In addition, HND students in Multimedia at the University of Gloucestershire were involved in web site design to promote the work of the project as a means of communicating with the wider community and beyond (see Reeves and O'Brien, q.v.). This work was an extended project within a module and was assessed.

### **Rationale**

A key aim of the live project was to engage communities in understanding the science of local flood histories and flood risk as a key element of place. Part of the ethos of the project was to involve student volunteers alongside community volunteers in different stages of the project. This activity was additional to the curriculum but allowed students working in related discipline areas within the formal curriculum to engage actively with representatives from diverse types of external organisations or community groups (for example, the Environment Agency, Local Authorities, National

Flood Forum, Community Flood Action Groups) and the general public. This has a variety of benefits for student learning including:

- Awareness raising of the issues in sustainable floodplain management and the things that count at individual level
- Identification of the capacity building and support needs of different and potentially vulnerable community groups
- Increased awareness of the positioning of different individuals and diverse community groups and organisations
- Opportunity for first-hand awareness and experience of the needs for a range of models in effective communication, particularly when dealing with specific community groups e.g. the elderly
- Encouraging development of students as active citizens with a sense of the wider implications of their study
- Opportunity for students to reflect on the application of their own learning in an education for sustainable development (ESD) setting.

### **Implementation**

The activity could be replicated in a variety of settings that encourage student liaison with community members in capacity building around a 'live project' with particular sustainable development theme. Staff input was as project manager and facilitator while students were self-selected as volunteers (one student has been involved in all three years of his programme). Every activity involved prior student briefing, discussion, anticipation of environment to ensure that the student felt confident to deal with their tasks and situations.

### **Sustainability focus**

Students had the opportunity to develop their sustainability skills by engaging with environmental and social aspects of sustainable flood risk management and flood risk science. While economic aspects were not the main thrust of the project, issues of tangible and intangible costs of flooding came out of discussions (sometimes heated) with community members and their views about floodplain development and the role of the Environment Agency. In one case, this involved students witnessing a heated 'umbrella pointing' engagement between a Local Councillor and a University colleague organising the Flood Forum!

The University aims to embed its learning beyond the 'class-room' within the local community. At the same time, tutors work to encourage students

to take responsibility for their own learning and to capitalise on both formal and informal opportunities for active learning and personal development. This allows the student build up a tailored personal development portfolio that provides evidence of skills that will be attractive to employers. The 'flood risk' project combines both elements of the University's engagement with the wider community with opportunities for extending sustainability-related learning opportunities and personal development of individual well-motivated students.

The Environment Agency is appraising the 'public understanding of science' approach to community flood risk awareness raising with the intention of cascading the approach out to other catchments in the UK. The good practice guidelines in community engagement produced for the Environment Agency and other organisations (McEwen, in preparation) will include an evaluation of the strengths and challenges of involving student volunteers in project teams.

### **Active learning**

The whole project is live, with the development of a variety of community links both at individual and organisational level. Students as volunteers contributed as part of the larger group on the basis of their prior learning, interests and skill development needs. Students have the opportunity to engage with a wide variety of types of organisations and individuals (of different ages, educational and socio-economic background).

Students were involved in a variety of ways and settings:

- In flood data input and flood risk analysis
- In public engagement in small and large community settings – discussing oral history accounts and other flood evidence/ experience
- Public liaison at a Flood Fair (March 2005) and a major Community Flood Forum organised by the project (Tewkesbury, March 2006) in National Science Week
- Student participation in a follow-up national workshop on good practice in community engagement with local flood histories and flood risk (February 2007)
- In addition, HND Multimedia students were involved in the design of a web site accessible to *all* community members (see Reeves and O'Brien, q.v.).

## Feedback

The engagement between students and the general public was generally very positive. Feedback took a number of forms:

- Feedback from the student volunteers was positive with a number of themes highlighted including opportunity to: engage as experts with the general public; act as professional ambassadors/ researchers for the University with tutors as peers; to interact with the wider community and share their knowledge and skills in community capacity building; and to ground their more formal theoretical study in practice.
- Feedback from the public and organisation at the Flood Fair 2005 (Local Government, Charity; Community Development representatives) was that the 'education' element added significantly to the success of the flood fair vis-à-vis previous events.
- Feedback from the HND students in web site design was positive and the opportunity to engage with the public in testing their designs was valued. Feedback from community members was that this testing of the web site was one of the highlights of the Community Flood Forum.

## Strengths and weaknesses

The project had a large number of facets and was 'win-win' in many ways that cannot be developed fully in the short discussion here. The student volunteers as self-selected individuals were well motivated and clearly gained in confidence from the experience. Many were aspiring for employment in the water industry and this was seen as a key activity to record on a *curriculum vitae*.

Challenges of the activity for the project leader were the logistical and time demands to run the different elements of the project effectively including marshalling the different volunteers. These time demands were underestimated in the original live project bid. Key issues included the extent that students should be left to find their own feet in particular problem contexts (for example, in dealing with challenging community members). In addition, English was not the first language of some volunteers and this sometimes led to communication challenges with older community members.

## **Programmes**

Student volunteers who have been involved in the project came from BSc/BA programmes in Geography, Human Geography and Physical Geography and the MSc courses in Environmental Policy and Management and Water and Environmental Management. The web design work involved HND students in Multimedia.

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### ***Key words:***

Volunteering; active learning; community; participation; flood risk management; capacity building

### ***References***

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