

The role of self-help groups in flood risk management

J.D. Simm

HR Wallingford, Wallingford, United Kingdom and University of Nottingham, United Kingdom

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Abstract

Limited budgets for flood risk management mean that river channels and defences associated with smaller (often rural) communities tend to receive less maintenance attention. In the United Kingdom, concern about increased flood risk within these communities has stimulated the formation of self-help groups to organise maintenance work or even construct flood defences. Based on information gathered during semi-structured interviews, participant observations and action research with the groups and counterpart professionals, the paper discusses the emergence of these groups, their motivations, activities and extent of their role. The paper identifies some barriers to their formation and activity, including legal and insurance issues and attitudes of flood risk management professionals towards citizen action. It compares their role and activities with those of riparian landowners and environmental management groups and examines professional attitudes towards the groups. Concluding that a 'trinity of communities' is operating within the self-help group context, the paper identifies some next steps for such groups.

1. Introduction

The emergence over the last 5 years of community self-help groups carrying out maintenance of channels and flood defences in the United Kingdom is a special form of activity which has not previously been seen. The motivations, activities and future for such groups have been investigated using a combination of 52 semi-structured interviews (including with 20 professionals and 20 action or self-help group participants) as well as in-depth action research case studies. The results of this investigation are described in this paper. The paper starts by considering the context for the emergence of these groups and their roots in historical practice. It goes on to consider the motivations and activities of the self-help groups, some emerging issues for their successful operation and their longer term sustainability and examines professional attitudes towards the groups. The paper concludes that a trinity of communities is operating and identifies some next steps.

2. Context

2.1. Early history of management of flooding

The challenge of flood risk management is not new. Whilst landmark buildings such as churches and cathedrals were located outside/above the flood plain, other dwellings by necessity or desire were

constructed nearer to water courses or the sea. Recognition of their susceptibility to flooding meant that they were generally of flood resilient construction, e.g. with stone paved floors which could be readily swept out after a flood. In mediaeval times, such land drainage and flood defence measures as were carried out in rural communities were managed by that local community rather than by the individual, with monasteries often playing a significant role. In 1252, for example, the predecessor of the first Internal Drainage Board was set up in the form of the Romney Marsh Commissioners, 'whose corporate planning and combined effort was required to create a living and working environment within the Romney Marsh.'

(<http://www.caldandwentidb.gov.uk>) This model approach, frequently with significant involvement from local landowners, was repeated many times, particularly in the seventeenth century, and, as with the Water Boards in the Netherlands, preceded any other form of truly local administration.

For urban areas, Commissions of Sewers were set up from the 13th Century onwards and were made permanent by Henry VIII in 1531; these had powers to investigate drainage problems, direct by whom works were to be carried out and assess the method of payment. (<http://www.w4idb.co.uk/history.htm>) In Victorian times, the need to improve public health drove the introduction of more reliable centrally organised drainage systems in urban areas such as those developed for London by Joseph Bazalgette.

In the meantime, flood management in rural areas continued much as before and retired farm workers ('linksmen') were often employed by the local landowner or community to keep drainage ditches in working order. After the second world war and stimulated by the 1953 storm-surge induced flood event and the perceived need for agricultural self-sufficiency, public investment in both land drainage and flood defence became more significant than locally driven activity (Tunstall et al, 2004).

2.2. Move from flood defence to flood risk management

From the mid-1990s onwards Tunstall *et al* (2004, p3) explain that "there has been a gradual transition towards a more strategic, multi-method, and integrated approach to land and water management: a flood risk management approach." This involved combining three kinds of measure:

- Flood abatement (or management of *sources* of flooding) e.g. the reduction of peak river stages during flood by measures such as flood storage areas and reforestation;
- Flood control (management of *pathways* of flooding) which involves the reduction of flooding mainly through the construction and improvement of flood defences
- Flood alleviation (management of the *receptors* of flooding) involving the reduction of flood impacts, for example through building control and land use regulation.

As Tunstall *et al* (2004) go on to explain, there is therefore now less emphasis on structural flood defences and increased emphasis on flood warning, public flood awareness raising, self-help, land-use planning and development control.

Sir Michael Pitt's report (2008) on the Summer 2007 floods emphasized the importance of people in flood risk management, but in seeking to put people at the centre it also opened the policy door to the introduction of local contributions to flood management, allowing local people to have a measure of control. The exact nature of these contributions was not defined although the emphasis was probably mainly financial and is being implemented through new funding mechanisms and is illustrated in a bottom-up way at a local level by the supportive local response to spending council tax in Gloucestershire (Cotswold News, 2008) on flood management.

2.3. Government policies towards voluntary activity

Well before UK Prime Minister David Cameron introduced his 'big society' idea (in contrast to 'big government') the importance of maintaining the long tradition of a voluntary or 'third sector' had been recognized by the previous government (e.g. HM Treasury, 2002, DCLG, 2008). National organisations such as Volunteering England were set up to promote volunteering generally. Research supported by the Commission for Volunteering (Ockendan, 2007) established the considerable extent of the existing volunteer base (estimated as the equivalent of a million full-time workers in the UK). There is also excellent value for money associated with low-level state funding support for volunteer groups; Ockendan (2007) cites a study of eight volunteer-involving organisations across Europe, including three in the UK, which reported a return of €3 to €8 for every €1 spent.

In the sector of volunteering closest to flood management, the interviews suggested that environmental river and coastal management groups have flourished driven by a desire to clean up rivers and coasts and improve habitats and motivated by passions for recreation such as fishing or simply altruism. However, these groups, such as the Rivers Trusts in the UK reported that they felt largely disconnected with flood risk management and little effort has been invested in engaging them to move in that direction. The emergence of voluntary action and self-help specifically focused towards flood risk management was a new turn and not really anticipated in the Pitt Review report nor in any other particular government initiatives. The particular reasons for self-help group emergence are now discussed.

3. Motivations of self-help groups

3.1. A catalytic event leading to an increased awareness of flood risk and need for action

Tunstall *et al* (2004) talk about the significance of catalytic events in driving changes in flood risk management policy and practice, citing examples such as the 1953 UK east coast floods driven by an exceptional North Sea surge event which also severely affected the Netherlands. In the UK the Summer 2007 floods were another such event and were particularly significant in driving forward self-help initiatives. A map prepared by the Environment Agency in Oxfordshire and surrounding counties showed that self-help groups tended to emerge in those rural communities which had experienced the most intense rainfall during the July 2007 event. Most of them had experienced more than 150% of the monthly average rainfall in just one day, even though they were defined as low risk by the Environment Agency. In these communities, although individual properties were severely flooded, the numbers were relatively small in comparison with urban areas. The communities recognised that a combination of poor benefit cost ratios and very little social deprivation would mean that physical measures would be very unlikely to attract public funding. Having decided that they could not afford to pay contractors for the necessary work, they decided to do the work themselves. Commenting on the river clearance activity he was involved in, one volunteer said:

"... one has to be realistic. These jobs have to be done. And there was a time when these jobs were done, regularly, and people were employed to do it. That's no longer the case and so we have to take it on ourselves - to sort these kind of things out at a local level." (I.45/2)

The summer 2007 floods were widespread in the UK and attracted a great deal of attention. But more localised events have also been the spur to self-help activity. One example of this a coastal farming community on the south coast of England (Hayling Island). Here, rising sea levels have meant that

overtopping of their defences has become more frequent. Successive events, combined with the prospect of no public investment, finally galvanised the local residents' association into action to repair a dilapidated sea wall.

Many of those interviewed from the self-help groups spoke about the need to 'do something' themselves about the flooding problems, recognising that complete alleviation of their flooding problems was unlikely.

3.2. Community solidarity with those affected by flooding and a desire to reinforce that

It was significant from the interviews that the motivation for involvement was wider than just personal self-interest. For example, one group leader said:

"Of the people who turned out, the vast majority of them were not affected by the flooding but there is this community feeling here: 'Our friends down the road have been flooded; well let's see if we can do something about it.'" (I.13)

Other interviewees went further and spoke of the importance of such activities in enacting and reinforcing the 'community spirit' which they considered already existed in these small villages.

3.3. 'Sense of place': desire to offer stewardship for rivers and coasts

The final component of motivation, although a little less overt, was a sense of ownership for the river or coast. A flood management professional commented:

"They're saying, 'Ok, we realise it's our river,' ... and that it's up to them to take action on it... They seem very happy to get into that." (I.3)

This attitude seems to be analogous to that which often motivates landowners, who were said to be

"all natural sort of conservationists and environmentalists at heart ... even if they're not religious, they say, 'It is ... God's land, we are custodians in our lifetime and ... hopefully those who come after us will continue our ... good custodianship.'" (I.26 landowner representative)

A similar conservationist attitude pervades many of the Rivers Trust environmental groups and it is often not just a matter of conservation, but restoration, because

"...they see it degraded from what they used to know." (I.35 – rivers trust manager)

3.4. Motivational overview

As shown in Figure 1, the human motivations identified above can be summarised within the classic hierarchy of Abraham Maslow (1943). Even though a number of aspects of this are contested because of the narrow case methodology by which it was derived, the elements and even their ordering remain useful as demonstrated in this case.

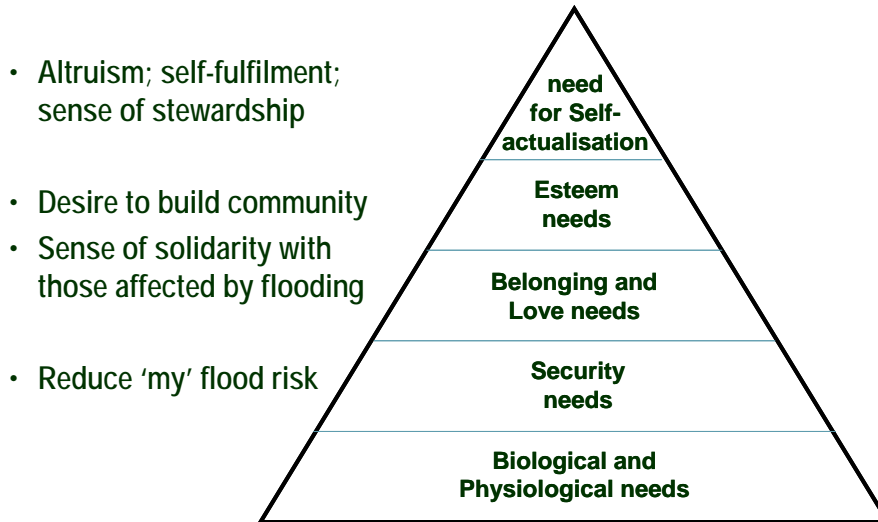


Figure 1: Motivations for involvement in self-help groups set against (in the triangle) Maslow's needs hierarchy

4. Activities of self-help groups

This section first describes the typical governance and membership of self-help groups. It goes on to reflect on the various activities of self-help groups within the context of the classic iterative management Plan-Do-Check-Act (PDCA) cycle popularised by Deming (1976) and adapted for infrastructure asset management (BSI, 2004).

4.1. Governance and membership

All groups identified managed to develop a form of governance which worked within the existing local democratic processes. Sometimes the group was run directly by a sub-group or subcommittee of the existing local parish council or residents association. In other cases, the group was independent but had sought and obtained a mandate from existing local democratic structures. Desire for affiliation with the National Flood Forum sometimes drove the independent groups to generate their own constitution.

Communication and generation of support was by a combination of word-of mouth, email and use of existing or specially-created websites. Often professional web-designers in the community would offer their services free of charge. The result was not only useful to the local community but also helpful for emergent groups in other communities (for example see <http://www.thehanneysfloodgroup.org.uk>)

The leader of the group was always found to be key to its success. A leader needed to be a self-motivated person, able to inspire the local community to action, willing to liaise with and influence the official FRM operating authorities and persistent in the face of apathy and even opposition. Responsibilities, either on their own, or with others, included:

- Identification of information including responsibilities and ownerships for different channels and defences
- Administrative tasks: consent applications, risk assessments, obtaining of insurance
- Organisation of a work programme and working parties for each day on which activity took place.

In terms of wider membership, most village-based groups initially seemed to be able to galvanise a significant number of people to get the work started. Numbers of people between 20 and 50, representing perhaps 10% of a village population, were not uncommon. The groups typically had a kind of 'wartime spirit' where everyone seemed to pull together to address the common problem (flooding). Subsequently, the numbers tended to stabilise at a lower level comprising those that were more committed to community action.

Depending on the nature of the task, working sessions might well be organised initially on a very regular basis (typically fortnightly) to get through the backlog of work arising from a lack of maintenance. Focussed campaigns like this were typically organised during the better weather during the summer and during the environmental window of opportunity (typically after bird nesting and/or before the arrival of overwintering birds). This could place pressure on arable farmers wanting to be involved because of the timing of harvest. Subsequently the frequency of activities might drop off to monthly or be left for a subsequent year.

4.2. Planning: developing a plan of action

Before a plan of action could be developed, the responsibilities for the various aspects of local flood management generally needed to be identified. These included:

- the landowners (both private individuals and organisations and public sector organisations such as those responsible for highways) as these might have responsibilities for maintenance of the channels and defences.
- organisations (Environment Agency in England) that would provide consents or licences for the works to be carried out, both from an environmental as well as flood risk perspective

In most cases, the plan of action emerged from one or more walk-over surveys of the river or defence line; these were often supported by a representative or representatives from the local flood risk management operating authorities.

Generally the focus was on identifying a combination of flood abatement and flood control rather than flood alleviation (although individual property owners sometimes adopted resistance and resilience measures to mitigate the impact of flooding on their own homes). Flood abatement was only an option in river situations and here the objective was to lower river stage, generally by clearance of vegetation and debris from channels either within or downstream of the affected community. Flood control was generally a matter of repairing existing defences including structural repairs and restoration of crest levels although in some cases the need for some modest new defence embankments was actually identified.

4.3. Doing: Monitoring and surveying

In addition to walk-over surveys that might be useful for assessing the amount of work required, interviewees indicated that the various kinds of monitoring listed in Figure 2 already were or could be carried out by volunteers.

<p>Hydraulic loadings</p> <ul style="list-style-type: none">• Rainfall (I.15)• Water level in rivers (I.15, I.18)• Water flow in rivers (I.18)• Water levels in boreholes (I.6, I.24) <p>Photographs</p> <ul style="list-style-type: none">• photographs from fixed locations (I.23, I. 27)• historic photographs (I.23)• amateur aerial photography (I.28) <p>FCRM assets</p> <ul style="list-style-type: none">• beach erosion/accretion – professional and anecdotal (I.23, I.27)• bank erosion/damage (I.28)• basic surveying using engineering levels and theodolites• cliff top positions measured from a fixed point (I.6, I.24, I.31)• Vermin (e.g. rabbit) populations in flood embankments (I.35)• trash screen blockages (I. 3, I.8, I.21)• flap or sluice gates/valves blocked open (I.8) <p>Wider environmental monitoring</p> <ul style="list-style-type: none">• Flora and fauna species surveys generally (I.11, I.35)<ul style="list-style-type: none">○ fish mortality (I. 36)○ live invertebrates (I.36)• Water quality generally (I.18)• archaeology (I.11)

Figure 2: Monitoring activities available for volunteer involvement

4.4. Doing: physical work on channel and defence assets

A list of types of physical work that have been carried out by groups is given in Figure 3. Aspects of these activities are now discussed.

<p>Flood abatement (influencing <i>sources</i>)</p> <ul style="list-style-type: none"> • Field scale water detention ponds (I.37) • Trash screen blockage clearance (I.3, I.8, I.21) • Clearance of culverts and drain pipes (I.15) • River channel vegetation, shoal and debris clearance (I.13, I.15, I.19, I.36, I.45, I.46) • Dredging of ditches and channels (from land, using landowner mechanical plant) (I.3, I.15, I.22) • Installation of bypass pipes (I.15, I.19) • Floodplain adjustments (e.g restoration of blocked historic flood paths; flow diversions (I.15, I.19) • Adjusting stream control structures (e.g. lowering mill sill levels) (I.15, I.19) <p>Flood control (influencing <i>pathways</i>)</p> <ul style="list-style-type: none"> • Creation of bunds (I.14, I.19, I.44,) • Maintenance, stabilisation and repairs to banks, bunds and defences (I.14, I.18, I.26, I.33, I.42) • Beach, dune and cliff stabilisation (I.11, I.27) • Bank vegetation clearance and management (I.15) • Vermin control on banks and embankments (I.35) • Opening and closing gates in flood defences (I.7, I.9) <p>Flood alleviation (influencing <i>receptors</i>)</p> <ul style="list-style-type: none"> • Individual property resistance and resilience measures (I.20, I.21) <p>Environmentally related</p> <ul style="list-style-type: none"> • Removal of invasive species (e.g. Himalayan Balsam) (I.15, I.35, I.36)
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Figure 3: Types of physical measures available to self-help groups

4.4.1. Materials and resources

Voluntary work by self-help groups may be cheap but it is not free. All groups identified (about 30-40) therefore have had to seek external support for their activities. A couple of examples will illustrate:

In the case of the Hanney's Flood group in Oxfordshire the initial vegetation clearance (Figure 3) was self-funded although subsequently they received funding from the Environment Agency (EA) for such items as additional hand tools, life jackets and waders, a small boat for use when working over water and a trailer for moving and storing the boat and other equipment. The local council and the EA shared the costs for equipment hire, coir rolls when an embankment was raised locally by up to 300mm to limit an unnecessary water path into the village. Village members organised the setting out of the works using an engineering level.

In the case of the Hayling Island Group, hessian bags were provided by the EA. The local farmers covered the cost of the cement and ballast and provided the small mechanical handler for mixing and helping to move the sand bags, including up onto the crest of the wall.



Figure 4: Vegetation clearance of Letcombe Brook, Oxfordshire. UK, by members of Hanneys Flood Group Summer 2008

4.4.2. Risk management

Groups interviewed were very conscious of health and safety issues and undertook basic risk assessments. Even if they did not wear the hard hats and high visibility jackets that would have been seen on a conventional construction site, those working over water all wore waders and life-jackets. Other issues considered were maximum weights for manual handling, avoiding interactions between people and moving mechanical plant, and a mutual self-care in regard to slips trips and falls.

In addition groups took out insurance to cover for injuries due to accidents and for third party liability using a scheme originally initiated by BTCV (British Trust for Conservation Volunteers) through Zurich Insurance.

4.4.3. Cost comparisons

Exact comparisons with conventional contracting are difficult, partly because of the nature of some of the work carried out, especially maintenance activities. However, in the case of the low embankment constructed by the Hanneys group, the direct costs incurred for materials and plant were about €7k compared to an estimated cost range of €35k to €70k if the work had been carried out by a contractor. The resulting value-out to cost-in ratio of between 5 and 10 is not uncommon for voluntary activity (see section 2.3 above).

4.5. Checking (or reflection on activity)

Reflection on activity included a mixture of soul-searching (about the effectiveness and quality of the work achieved) and celebration.

4.5.1. Effectiveness

At Hayling Island there was recognition that the combination of front face repairs to the sea wall and crest level renewals had at least reduced the risk of breach on future extreme tides. Amongst the groups in Oxfordshire there was the positive recognition that flood risk had been reduced by their activity. The Hanneys Flood Group have seen this in a very tangible way as the level in the Letcombe Brook drops visibly after their summer river vegetation clearance (on the first occasion the drop was by about 0.5m).

On the other hand, the groups also came to recognise that although some aspects of their work such as the bank raising were complete, other activities such as river vegetation clearance would have to be repeated each summer:

“the first time we did it we were very satisfied that we had done a really good job and we got it really quite clear... What we found however was after about only three months, we found that the vegetation had grown certainly about halfway towards its original situation ... And that really started us on a trail of saying, ‘Look, if we are going to do this and we are going to be successful, the only realistic way of doing it is to do it on a very regular basis’ ...” (I45/7)

And referring to trash dumped in the river,

“We thought we had cleared it up, but obviously there’s always work to do” (I45/7).

4.5.2. Quality of work

The activities of the Oxfordshire self-help river management groups had analogies with farming or gardening with which many of the volunteers involved had some familiarity. Quality, from the perspective of the Oxfordshire groups, was therefore not a major issue.

Quality was more of an issue with the Hayling Island Group who became more involved in working with engineering materials (in this case concrete) with which expertise and familiarity was patchy. As a result the consistency of batching and mixing the dry concrete which was placed in the hessian bags was eventually recognised by the group as being poor, with insufficient cement being added on some batches or inadequate mixing taking place with the mechanical shovel. The quality of the eventual placing of the bags was generally good, but there was subsequent disappointment when the mix in some of the bags failed to set, possibly exacerbated by lack of rain or high tides to wet the bags in situ. This was a painful lesson given that the purchase of the materials had been funded by the local farmers. Some of the farmers had argued against the

whole concept of repair works using concrete filled hessian bags; they argued for the use of vertical concrete panels and actually went ahead and installed these on one section of the sea wall (with mixed results, in the author's view).

4.5.3. Celebration

The sense of achievement by the groups should not be underestimated, nor should its carry-over into the community of sense of security and enhanced community cohesion. The membership secretary at Hayling Island commented on this in her weblog:

"Without doubt this repair work is proving to be a great way to get to know your neighbours. The friendly banter and teamwork really shows what strong community spirit we have in the village. ... It truly feels like the village has pulled together in order to achieve something substantial and rewarding. I've also heard talks of 'Well, what's next? The rest of the wall?' Or talk about a Village Social in the Hall? A fete next summer? Barn Dance? World Domination? Or are we content just to keep up the jolly and community atmosphere in Northney and Tye we have created so far this summer?"

The Hayling island group went on to celebrate their achievement by holding a barbeque and light-hearted 'awards evening'.

In the case of the Hanneys Group, their work was recognised along with a number of other self-help groups in a 'Flood Heroes' evening at which the awards were presented by local MP (now UK Prime Minister) David Cameron (Figure 5)



Figure 5: David Cameron, left, talks to Stewart Scott, chairman of the Hanneys Flood Group at the 'Flood Heroes' awards, 2010

Source: Oxford Mail group

4.6. Acting (i.e. activity after checking/review)

Most of the groups in Oxfordshire have carried out repeat maintenance since their initial campaigns of channel clearance. The Hanneys group had the unexpected assistance of a family of swans who, liking the improved habitat of the Letcombe Brook, took up residence and duly obliged by eating some of the river vegetation!

At Hayling Island, after extensive and not always well-informed debate, various measures were put in place for the final working session of the summer 2009 to try to overcome the problems with the concrete mix,

including using a better quality of ballast and being more consistent with the amount of cement. Further repairs are still needed but these have been stalled by difficulties in getting agreement about next steps with and between the landowners.

5. Issues in self-help group operation

5.1. Role of land managers and farmers

It is evident from the experiences of the rural groups with which engagement took place that developing a successful working relationship between the group and local farmers/landowners is vital. Often these farmers are the riparian owners of large lengths of river or defence which are of concern to the self-help group. Potentially, they can be appreciative of the support of the community both to identify the riparian owner and to get them cleared, especially if finance from the farm is limited. In some cases they may not even be clear about their own responsibilities:

“a lot of them don’t understand what ... the rights and responsibilities of landowners are, you know, who’s responsible for these sort of things. So, for example, on the ditches we spoke to landowners, “You know, there’s a ditch here that’s all clogged up”, and he said “Yes, but it’s not my problem ... I can’t do anything; it’s the Highways.” “Oh no, it’s not the Highways, it’s actually your responsibility, because it’s your land.” “Oh is it, O well, in that case I’ll get it dug out.” And two weeks later he dug out almost 500 metres of ditch. Purely, everybody’s willing to do something, it’s just not knowing how to go about doing it, who is responsible.” (1.15)

The self-help groups can also be helpful to farmers in those areas where access using mechanical equipment is difficult. On the other hand landowners may disagree with the need for the action or the method of approach being adopted:

“In some cases the farmers are heavily involved and will even help out by taking some of the, you know, the material that comes out and take it away in their tractor, so they would be part of that self-help group; that is great, but where they are if you like a distant neighbour or ... “Well this isn’t something that I really want to be actively involved in”, it can make things quite difficult.” (1.46)

5.2. Environmental management

Present-day attitudes towards environmental management are often seen as a significant issue for self-help groups keen to reduce flood risk

“it is in the farmer’s interest to keep the stream flowing well and keep his land well drained. Also, from the discussions we’ve had with the landowners and farmers, they’re very keen to do it themselves ... it’s just up until now, they’ve felt, rightly or wrongly, that the Environment Agency are not letting them do it, because every time they’ve wanted to do something, the Environment Agency’s said, ‘If you touch that river, we’ll take you to Court.’ And that’s been the attitude, so they’ve been fearful of doing anything, even removing a fallen tree in the brook, because they know... the Environment Agency will just take them to Court ... that has gradually changed now; so the Environment Agency’s realised that they’ve gone too far and now they’re allowing people to do the simple things like, you know, simple maintenance on the brook.” (1.15)

On the other hand, self-help groups do not necessarily completely separate out flood risk management from other aspects of their managing their local environment. Furthermore, the manual work which is often done can be more sympathetic to habitats than machine working. One volunteer commented:

“it is far more friendly to the environment than the old ways of the Conservancy that used to be to come in and cut everything down and good was lost with bad.” (I.45/1)

The interviewee concludes:

“you have to balance the ecology of the river with its purpose; its purpose is to drain the land and I think the work we have done over the last couple of years is about finding the right balance.” (45/1).

This ‘right balance’ included removal by the self-help group of invasive species such as Himalayan Balsam and reduction of siltation allowing native fish species (e.g. crayfish) to return (I.15).

In a different way, on the coast issues about managed realignment are becoming significant in many rural areas. The group on Hayling Island experienced a long period of uncertainty because of delays in the statutory organisations reaching an agreement through the Shoreline Management Plan as to whether the defence line at their village was to be retreated. Eventually, the residents association obtained an agreement to carry out holding maintenance. Later on, they successfully argued for the retention of the wall on its current alignment (partly on the grounds of the farmland between the village and the sea acting as a key storage area for rainfall during high tide events and preventing back up flooding in the village). But the SMP also made it clear that public funding would not be made available for the maintenance of the wall and so in future if the wall is to be maintained it will have to be by a combination of self-help and riparian land-owner input.

6. Professional attitudes towards self-help groups

Part of the research examined in some detail attitudes towards volunteer and self-help activity by professionals.

In the early phases of the research (2007 and 2008) the author encountered significant resistance from professionals to the idea of making use of volunteers or self-help groups. In many cases the idea of working with volunteers had not even been considered as an option (I.6). When they did start to think about it, reasons that professionals gave for being reluctant to engage with self-help volunteers included:

- “monitoring of structures ... would [rarely] spark someone’s interest” (I.11)
- volunteers might make misleading assessments of the condition of assets (I.8)
- volunteers might make statements “in the name of” the EA which are not correct and this and their work might impact adversely on the reputation of organisations such as the EA (I.8)
- worries about health and safety and concerns they may not identify key risks (I.3, I.8, I.12) and not being aware that groups would want to undertake risk assessments and provide mitigation;
- concerns about legal liability, especially if EA has specifically asked a self-help group to do something (I.8, I.12), and not being aware of the insurance options available to such groups
- concerns about potential environmental damage if self-help groups were given permits for flood risk management work (I.3, I.19)

Similarly, in the early days volunteer groups reported they had received quite a negative reaction from professionals they had approached:

“I think there’s a tendency for [professionals] to say, you know, ‘Don’t ask, you wouldn’t understand.’ You know, there’s a tendency to assume that everybody in the public is a nincompoop, and they don’t understand, so there is this bafflement. So you know, ‘Look, well try and explain to me.’ And then once you do start to ask them questions, then you realise, actually, sometimes they don’t know what they’re talking

about. And so when you ask these more probing questions, they say, 'Oh we'll have to refer you on to somebody else.'" (I. 15).

Once professionals had started to think about the idea more seriously, the instinctive reaction was to then to focus on what was seen as an opportunity to inform, educate and overcome

"a complete lack of trust in professionals, not helped to some extent by the way the Environment Agency has dealt with them recently" (I. 11).

Professionals spoke of a willingness to help groups with advice and information, but at the same time to 'sell' their ideas to them, seeing self-help as a way of engaging with citizens and getting them to better understand issues (such as the necessity or otherwise of maintenance) from the perspective of professionals (I.29).

When challenged to think about what the self-help groups might be able to offer them, professionals were most positive about the provision of information. Here they were on safer ground because many of them had direct experience of the value of 'eyes and ears' to pick up emerging problems (I.8, I.23, I.28) from those such as fishermen or the 'dog walking brigade' (I.8, I.3). However there were mixed attitudes about value and quality of data that could be provided. Professionals interviewed spoke of the need to control procedures (I.6, I.11, I.8) and suggested restricting information to photographs (I.11, I.29, I.31) and very simple measurements (I.6). Crucially they tended to view the information as only being of supplemental value and not to be relied upon as baseline information. The whole tenor of these responses was that volunteers might be able to assist professionals in coming up with better solutions.

After professionals had had experience of some self-help group activity, attitudes tended to change. They tended to recognise how much local people value their assets not just for their flood defence function but with a more holistic view (I.46). In fact one or two professionals started to express concern emerged that the potential of self-help groups was not being exploited as much as it could (I.46), especially given that the work could be politically labelled as 'big society'. The concern was that the movement could die out without support. In order to prevent this, professionals with experience of self-help activity emphasised (I.29, I.44, I.46).

- the importance of providing the information the groups were seeking
- the value of giving them a contact person
- the value of providing some seed-corn funding for basic equipment and some materials and the good return on that money (there was a need to find of way of demonstrating the value of self-help work without, for example, using full conventional river modelling)
- the importance of putting in time and effort up front to engage with and guide the groups e.g. walk-over surveys, action plan development, advice on consents and environmental management
- the complementary value of the activities of self-help groups to that of the work forces of operating authorities, for example by doing an additional channel clearance per year if there was insufficient budget/resource for the EA to do it (I.3).

Within the Thames West area of the EA (Oxfordshire and surrounding counties) this support went further and a full time coordinator for the groups was appointed. A discussion of the role and effectiveness of this coordinator and the lessons learned from this approach will form the subject of a separate planned paper. In the meantime it is worth noting that having a common point of contact for the groups was really appreciated by them and helped to stimulate the formation and activities of a significant number of additional self-help groups.

7. Long term sustainability of self-help activity

It is still very early to draw any firm conclusions about the sustainability of the groups. Seen from the perspective of Operating Authorities this is a significant long term risk. At Lympstone, Exe Estuary, where the Environment Agency engaged a group of local residents to close the small flood gates at times of flood warning, a legal agreement was drawn up with the parish council as a back-up to the voluntary agreement to ensure that as nominated gate closers became unable to continue their role, they would be replaced (I.10).

At Hayling Island the issue of the group’s sustainability did not emerge as a major issue because of it sitting so firmly within the residents association. The summer (2010) following the main wall repairs, many of the same group became involved in an activity to refurbish/redecorate the village hall. The issue of sustainability of seawall repair works here seemed more to relate to the willingness of the farmers to allow the work to continue and the overall sustainability of the wall given rising sea levels.

In regard to the Oxfordshire river management groups, one self-help group coordinator recently expressed his concerns to the author over a somewhat diminishing sense of interest in the work of the group, as the problems are seen to be ‘resolved’ and with southern England moving into a couple of rather drier years. A number of groups have recognised that making information available (about what they are doing and the flood risk reasons for it) can be very powerful in encouraging on-going participation and action. The EA coordinator for the Oxfordshire groups comments:

“maintenance has to be on-going year after year; and how sustainable is this way forward? and I think again it’s about educating everybody and [having] a feed from younger people coming in as people retire.” (Keith Lead, Interview 19)

8. Synthesis

In an earlier paper (Simm, 2007), the author suggested the importance of moving the role of the citizen in flood management up Arnstein’s (1969) ladder of citizen participation (Figure 6). The self-help groups which have emerged in the UK have certainly demonstrated this upward movement and sit somewhere near the top of the ladder

8	Citizen control (or self-governance)	Degrees of citizen power (or participation)
7	Delegated power	
6	Partnership (or co-operation)	
5	Placation	Degrees of tokenism (or symbolic participation)
4	Consultation	
3	Informing	
2	Therapy	Levels of non-participation “contrived to substitute for genuine participation”

Figure 6: Sherry Arnstein’s ladder of citizen participation (after Arnstein, 1969 adapted by Carr, 2002)

Whilst the top of the ladder is generally seen as a good place to be, it can imply a degree of abrogation of responsibility by government (Carr, 2002). This is a dangerous place to be: for example there is evidence of some self-help groups who have been left to their own devices to the detriment both of flood risk and the environment (I.39). Nonetheless, the groups generally have demonstrated their worthwhileness in the areas previously identified: flood risk management delivered in a manner advantageous to the exchequer,

improved understanding of the local environment and partnership with the professional community. As a significant spin-off, they have also helped to actively demonstrate their own sense of belonging in community and place (Warburton, 1998, Sennett, 1998, MacMillan & Chavis, 1986)

The analysed evidence of the self-help activity has reinforced the previously postulated model (Figure 7) in which, inverting previous thinking by Liepens (2000) and combining it with that of Gorringe (2002), a trinity of communities was identified:

- Community of place
- Community of meaning
- Community of practice

The '*community of place*' is that which the group seeks to serve: the '*geimende*' with its own localised group of residents and landowners and its own particular geography and environment. It acts as a significant motivation to action for the self-help group (as described in Section 3 of this paper).

The '*community of practice*' is a term used in relation to the business world where it is used with a fairly broad interpretation (see Wenger *et al*, 2002). However, it can also be seen to represent the Plan-Do-Check-Act cycle of practice through which a self-help group moves. The vertical *axis mundi* against which this community is set in Figure 7, moving up and down between locality and globality, represents the dynamic tension in which the group operates between the problems and actions in the locality and the principles and policies associated with the governance of the wider river and coastal environment.

The '*community of meaning*' is an expression not found elsewhere but can be seen to represent the partnership between the self-help groups and the flood risk management professionals or practitioners. As this paper has indicated this is not always a comfortable relationship and only comes into existence once a common set of meanings has been developed.

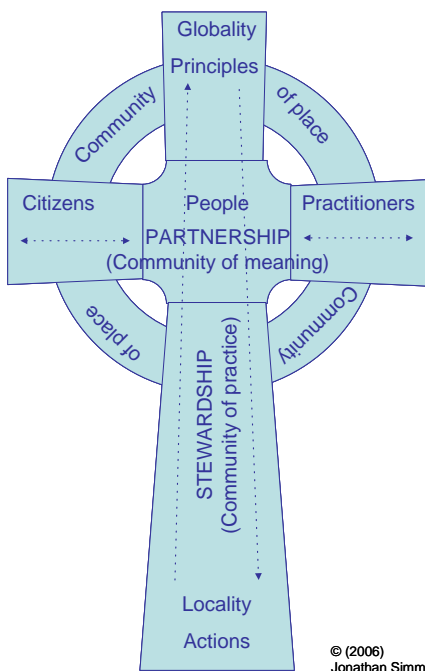


Figure 7: Trinity of communities for self-help groups

People sit at the centre of the trinity of communities and in this regard the leaders of the self-help groups and their key contacts in the Operating Authorities play a vital role, acting in many ways as mediators and helping a partnership, or *koinonia* to develop. As one self-help group leader put it:

"It's very much a team work. We see ourselves like we are the initiators and pushers and the Environment Agency are providing the technical support and other support." (I.15)

9. Conclusions

The emergence of self-help groups in flood risk management has been stimulated by recent severe flood events and motivated by desires (c.f. Maslow 1943) for increased security in the absence of public funding, for community solidarity and by a sense of stewardship.

Working governance arrangements for the groups have been identified, including measures for risk management, environmental management and collaboration between landowners. The activities of self-help groups, understood within the context of a classic Plan-Do-Check-Act cycle (Deming, 1986), have included:

- Initial assessments including walk-over surveys and co-planning with operating authorities;
- Physical work primarily in the areas of flood abatement and flood control;
- Reflection on activity including assessments of work quality and effectiveness, and celebration;
- Further physical activity, including (repeat) maintenance.

Although still limited in extent, the paper identifies that self-help is a notable demonstration of the highest forms of citizen participation and involves a trinity of intertwined communities of place, of practice and of meaning.

Despite initial reservations by professionals in FRM, self-help group activity is an idea whose time has come within the context of UK governance and funding of flood risk management measures. It is a delicate plant that needs nurturing by professionals if it is to survive. However, it offers great value, not just in managing flood risk in smaller communities in a cost effective way but also in terms of wider environmental management and in local community cohesion. Ongoing and increased support from FRM professionals is needed if this dream is not to fade.

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