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## FCRM volunteer baseline data and typology development

Report – SC120013/R1

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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# Evidence at the Environment Agency

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The work of the Environment Agency's Evidence Directorate is a key ingredient in the partnership between research, guidance and operations that enables the Environment Agency to protect and restore our environment.

This report was produced by the Scientific and Evidence Services team within Evidence. The team focuses on four main areas of activity:

- **Setting the agenda**, by providing the evidence for decisions;
- **Maintaining scientific credibility**, by ensuring that our programmes and projects are fit for purpose and executed according to international standards;
- **Carrying out research**, either by contracting it out to research organisations and consultancies or by doing it ourselves;
- **Delivering information, advice, tools and techniques**, by making appropriate products available.

Miranda Kavanagh  
**Director of Evidence**

# Executive summary

This report provides baseline data on flood and coastal risk management (FCRM) volunteering and presents a typology that aids in the categorisation of data on this type of volunteering. This can provide useful information for any future segmentation study that might be undertaken to assist the Environment Agency in taking a more targeted approach to volunteer recruitment, retention, communication and management.

Our review of the scientific literature revealed a lack of information about volunteering in connection with floods. Collecting evidence from the EA and secondary sources provided examples of 97 projects across the country which involved volunteers in flood risk management. The projects revealed gaps in data and understanding around the specific motivations and benefits of flood risk volunteering, and associated costs. Survey and case study research aimed to fill this gap. Our research shows that volunteers undertake a wide range of activities, before, during and after flood events, which can enhance FCRM outcomes, including:

- Monitoring rainfall, river or tide levels and reporting data to the EA
- Participating in a flood group or forum to develop flood plans
- Raising awareness and passing on flood warnings to the community, including through social media, operating and maintaining EA assets such as flood gates and pumps
- Physical action to clear shrubbery, and debris from culverts, drains and the banks of rivers
- Specialist contributions including the design and construction of engineering solutions to flood problems

Volunteers can get involved in a wide range of tasks and activities and this variety can potentially be useful in the recruitment of volunteers as it provides a range of opportunities that could fit with people's interest, motivation, skills and time.

An FCRM volunteering typology has been created to help consider volunteering from different perspectives. Three typologies explored include:

- Volunteering segment (individual engagement, Partnership working, community action)
- Benefits to communities
- The objectives of the Environment Agency

The typologies include variables such as governance, mode, experience (motivation) and volunteering type. The main objective for this is to aid the decision making process of how the Environment Agency engages with volunteers and to help evaluate the volunteers experience (e.g. benefits of volunteering).

The next stage of the research involves the development of an evaluation framework that can be used to gather strong and reliable evidence on FCRM volunteering.

# Acknowledgements

Thanks are due to all the Environment Agency FCRM teams who provided information for our baseline data gathering, enabling us to start getting an understanding of FCRM volunteering and current projects and activities.

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# 1 Introduction

This document describes Work Package 1 of the Environment Agency project, 'Investigating and appraising the involvement of volunteers in achieving FCRM outcomes', being carried out on its behalf by Forest Research.

Work Package 1 involved the gathering of baseline data and the creation of a spreadsheet populated with this evidence. These data have also been given to the Environment Agency.

The objectives of the overall research project were to:

1. Establish a common and up-to-date understanding of volunteer involvement in flood and coastal risk management (FCRM) activities. This baseline information will be used to identify FCRM activities delivered by volunteers.
2. Develop a consistent evaluation framework that enables the Environment Agency and others to consider the benefits of involving volunteers in the delivery of FCRM activities.
3. Understand why people are motivated to get involved in FCRM activities in their communities, the capabilities they need and their capacity to help deliver a range of FCRM outcomes. Using the evaluation framework developed to meet Objective 2, this analysis will include whether volunteers working on FCRM activities may be willing to help bring about other environmental outcomes.
4. Develop a strong evidence base (including case studies) that explores the effectiveness of involving others in the delivery of FCRM activities and assesses the efficiencies a range of approaches may realise. This includes whether working through other organisations would enable the Environment Agency to achieve more outcomes in communities at risk of flooding.
5. Enable the Environment Agency and other flood risk management authorities to take evidence based decisions on how and when to engage, develop and sustain volunteer participation in FCRM activities.
6. Inform the development of operational guidance that equips Environment Agency staff to target their efforts effectively and to maximise the benefits of involving volunteers in the delivery of FCRM outcomes.
7. Ensure both internal colleagues and external stakeholders are kept informed in an engaging way.

This report feeds into Objective 1. Other reports available from this research include:

- Work Package 2 Report: Developing an FCRM evaluation framework  
With two supporting resource spreadsheets: 'Environment Agency volunteer evaluation review' and 'Environment Agency evaluation framework criteria and indicators'
- Work Package 3 Report: Case study, survey, diary and interview research on FCRM volunteering
- Work Package 4 Report: Issues and options concerning FCRM volunteering
- 'Volunteers' contribution to flood resilience', Research Note by Forest Research for the Environment Agency, March 2014



## 2 Work Package 1 objectives

The objectives of Work Package 1 (WP1) were to:

- provide an up-to-date synthesis of the nature of volunteering connected with FCRM.
- produce a characterisation or typology of FCRM volunteering.

This represents an essential first step in the development of a unifying framework for understanding and evaluating FCRM volunteering. WP1 consequently has close links to the development of the other work packages.

The Environment Agency's first objective for this piece of work was to establish a common and up-to-date understanding of volunteer involvement in FCRM activities.

The research questions guiding this evidence synthesis were:

- What evidence is there about FCRM volunteering and what does it tell us?
- How does the available evidence relate to previous research focused on segmentation of environmental/FRCM related volunteering?
- How can FCRM volunteering be characterised in a way that is meaningful to the Environment Agency and relates to its need for evaluation and assessment of how it works with and engages volunteers in FCRM outcomes?

# 3 Method

The methodological approach taken was to:

- i. Collate and examine a baseline evidence set provided by Environment Agency flood resilience teams and Environment Agency supplied background documents.
- ii. Code and characterise the evidence.
- iii. Identify any evidence gaps.
- iv. Suggest an approach to filling any gaps through a desk and web based review of up-to-date literature and any additional discussions with Environment Agency staff.
- v. Develop an FCRM specific typology of volunteering using the extended baseline evidence set produced by tasks i–iii.

## 3.1 Collection and collation of baseline evidence

The baseline evidence came from a number of different sources.

### 3.1.1 Desk-based review

A desk-based review of evidence relating to volunteer activity and community engagement in flood risk management and resilience activities relied on 39 reports and documents supplied by the Environment Agency (Table 3.1).

**Table 3.1 Type of documents examined in desk-based review**

Type	Number	Description
Strategy documents	3	Internal material documenting Environment Agency policy development and national level proposals around volunteer engagement in which particular examples of volunteering and community engagement activities were mentioned.
Case studies and press cuttings	18	Described interventions and projects relating to partnership, community and individual volunteer projects and activities.
Assessment or evaluation documents	3	Described a pilot project, intervention or campaign with a volunteering component, including outputs or outcomes.
Guidance documents	6	Internal materials providing instructions and best practice learning on volunteer engagement and community-focused flood engagement, which mentioned specific examples of volunteering.
External documents	9	Reports and journal articles reviewing aspects of volunteering and other relevant issues.

The 39 reports and documents are listed in Section 8.

The examples of volunteering found in these documents were supplemented by an online search for additional articles or web pages and websites linked to the specific community groups and volunteering projects.

### **3.1.2 Questionnaire survey**

Baseline data was also collected via a questionnaire survey developed by Forest Research which was sent to 19 Environment Agency Area based engagement advisors. A total of 22 responses were received by 1 August 2013 (see Section 8.6). Three sub-areas did not respond with any baseline information. Some staff sent more than one example from their areas.

The survey asked 12 questions to elicit information about the range and numbers of volunteers currently engaged with the Environment Agency or via a partnership, and summarised activities the volunteers undertook. It explored whether the volunteering was linked to a specific project and asked whether any demographic information about the volunteers was known such as age, gender, ethnicity and socioeconomic status.

### **3.1.3 Spreadsheet**

Details of all the examples of volunteering found in this review of evidence (that is, documents and survey) were collated in a Microsoft® Excel spreadsheet. This acted as a form of database and an analysis tool.

The information about each of the examples found and put into the spreadsheet followed the simple characterisation shown in Appendix A. These 'variables' were derived in two ways:

- using factors shown in the literature to be important in understanding and evaluating volunteering and the reasons behind volunteer engagement
- an initial characterisation of the specific and key dimensions of FCRM focused volunteering revealed in the baseline data

After data cleaning and checking for duplication, a total of 97 examples of FCRM volunteering were included and used as the basis for framework development.

## **3.2 Coding and characterising the evidence**

The process to characterise the evidence collected was an iterative one, including discussion among the project team and with the Environment Agency project manager.

The same principles of a segmentation methodology were followed, although it was not possible to attempt a full segmentation due to the quality of the data. New variables were added and defined through discussions, guided by a profiling matrix (Appendix B), which includes the definitions of some of the main characterisation variables.

Segmentation is a practical tool, originally developed in the context of commercial marketing. It can provide a focused understanding of the public, customers and so on that can then help to inform the more effective achievement of strategic objectives related to policy, delivery, communication. A focused segmentation model may give a better understanding than sub-dividing an audience by other means such as by

socioeconomic grade (Cabinet Office 2009). Defra's framework for pro-environmental behaviour provides a useful example of a segmentation (Defra 2008).

Segmentation analysis relies on a large data sample. This is subject to cluster analysis or similar, using variables of specific interest, which allow natural groupings or clusters to 'fall out' from the sample. Construction of typologies and characterisations may use large samples, but statistical techniques are not applied and the interpretation of results remains qualitative as there is often not enough suitable data to carry out a statistical analysis or a statistical analysis is not required. A typology is a study of types of things, objects or people that share similar characteristics and therefore can be grouped together because of these shared characteristics.

The baseline data set did not lend itself to segmentation. However, the basic principles involved in segmentation analysis were used as the systematic approach in formulating a typology of FCRM volunteers. The approach employed the following three steps.

### **3.2.1 Profiling**

The first step involved profiling likely groups of cases according to the features most connected with the segmentation objectives. In this case, this is about variables or attributes specific and important to the form and function of FCRM volunteering.

The profiling exercise used characteristics and groupings around 'kinds of volunteers' and 'kinds of volunteering' already suggested by other studies and evidence collected or commissioned by the Environment Agency.

### **3.2.2 Identify the key variables of interest**

The second step involved identifying variables that were felt to be most significant in segmenting the broad groups of volunteer types recognised in the profiling exercise.

Elaborating the list of variables may involve re-coding or aggregating attributes identified in the profiling phase. It uses initial examination of trends and patterns within the data/evidence to assess which factors are likely to be most influential in explaining differences or creating clusters between volunteer types that answer the research objectives (see Section 3.3).

### **3.2.3 Typology development**

The primary data required to complete the third step of a segmentation analysis (that is, running a cluster analysis using the variables identified in Step 2) were not suited to the dataset due to the lack of quantitative data available. In this case, consideration and cross-tabulation of the most important variables led directly to typology development.

## **3.3 Profiling the dimensions of volunteering**

To carry out this task, a number of variables of significant interest were identified (see Appendix B). These are summarised in Table 3.2.

**Table 3.2 Variables and dimensions of volunteering**

<b>Variable</b>	<b>Dimensions</b>
Who is volunteering?	<ul style="list-style-type: none"> <li>• <b>Volunteering level</b> – individual, community or partnership?</li> <li>• Volunteer <b>experience of flooding</b> and understanding of risk – this links to motivation and communication</li> </ul>
Why the volunteering is happening?	<ul style="list-style-type: none"> <li>• What the <b>volunteering experience involves</b> – matching of opportunity to motivation</li> <li>• The <b>commitment</b> – match/suitability with available time (could also include skills, importance of volunteering to the individual and so on)</li> </ul>
What kind of volunteering?	<ul style="list-style-type: none"> <li>• <b>Mode</b> – prevention, response, emergency</li> <li>• <b>Activity</b> – kinds of activities being undertaken</li> </ul>
Where is the volunteering taking place?	<ul style="list-style-type: none"> <li>• <b>Location in an organisational sense</b> – which part of the Environment Agency business. This relates to how Environment Agency might view engagement, links between parts of the Environment Agency business, and any operational limitations.</li> <li>• <b>Location in a cartographic/risk sense</b> – is this an area of high, medium or low flood risk? As this will affect people’s motivations, what they are doing, level of commitment, seasonality and so on. It is also pertinent to Environment Agency involvement and assessment approaches.</li> </ul>
How – <b>governance of volunteering?</b>	<ul style="list-style-type: none"> <li>• Working directly for Environment Agency</li> <li>• Working in partnership with other organisations</li> <li>• Working through others</li> <li>• Communities working for themselves</li> </ul>

## 4 Gaps in the evidence

Even though the variables that appear to be of significant interest were profiled, the baseline evidence highlighted a number of gaps in the data gathered, including variables that may be crucial to understanding the nature of FCRM volunteering.

Within the baseline data there is little information on:

- The specific detailed activities volunteers are undertaking
- Site location – geo-referencing to provide specific geographical locations
- Volunteer numbers
- Volunteer sociodemographic features
- Explicit information about the motivations for volunteering in an FCRM context, that is, understanding of risk, response to flooding experience, commitments that are influencing volunteers beyond the motivations that have been identified in wider conservation and environmental volunteer data.<sup>1</sup> These motivations can include a commitment to an organisation or cause, meeting people, gaining skills, using existing skills or keeping active. On synthesising the evidence that is available, it is clear that FCRM motivations are different, being focused more on reducing individual/community risk and increasing resilience, rather than wider environmental volunteer motivations often associated with skill development for increasing employability or physical exercise. This is not just of theoretical interest. If the Environment Agency's policy aspiration is active citizenship around flood resilience, FCRM-specific motivations are important for judging how to facilitate continued commitment and community level volunteering rather than one-off or irregular individual level volunteering.
- Inputs (financial, time and other resources) – costs or value of staff/project/volunteer time, training, materials, tools and in-kind contributions
- Benefits (outputs and outcomes) for partners, volunteers or the wider community. Information here is largely qualitative, anecdotal or inferred. There is very little measurement of outputs (for example, kilometres of waterway cleared, metres of ditch dug, number of gates manned) and no real consideration of outcomes such as the number of households protected and flood incidents averted.
- Economic values – because the output and outcome data are so sparse the economic value of volunteering cannot be calculated.

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• <sup>1</sup> There is a very large literature on motivations. See for example: Anderson and Moore 1978; Bales 1996; Chambre 1987; Clary, et al. 1991; Cnaan and Goldberg-Glen 1991; Dailey 1986; Gora and Nemerowicz 1991; Gratton, et al. 1997; Green and Chalip 2004; Okun 1994; Okun and Eisenberg 1992; Omoto and Snyder 1993; Omoto and Snyder 1995; Pearce 1982; Pearce 1993; Wymer 1997) (Coulthard, et al. 2002; Countryside Commission 1980; English Nature 2004; Home Office 2001; Home Office 2003; Institute for Volunteering Research 2006; Irving and Nature 2003; IVS 1997; Kitchen, et al. 2006; O'Brien 2005b; Ruston 2003; Ryan, et al. 2001; Seyd 2005; Tabbush and O'Brien 2002; Volunteering England Information Team (no date)

The inputs, benefits and economic values are all particularly pertinent for understanding FCRM volunteering and value for money questions – explored in Work Package 3.

There might be existing information that could fill these gaps which Forest Research has been unable to access. However, Forest Research is clear about what information is not available in the evidence it has examined.

It will be useful in the workshops planned with Environment Agency staff to:

- discuss their awareness of these evidence gaps
- explore whether relevant data are collected by other areas of the business or by some of the Environment Agency's partners

It may be possible to gain further evidence through the case study research and the interviews with Environment Agency and partner staff as well as with volunteers.

One dimension of volunteering that is not covered in this report is 'when' volunteering might be likely to take place. People might get involved in volunteering at different life stages, for example, when they retire, as they seek to develop skills for employment or a career change, going from full time to part time work, or when directly asked by someone (O'Brien et al. 2008, Brodie et al. 2011).

# 5 Defining a volunteer and volunteering

This project uses the Home Office (2005) definition of volunteering. This is:

‘an activity that involves spending time, unpaid, doing something that aims to benefit the environment or individuals or groups other than (or in addition to) close relatives’.

The evidence gathered in this baseline research suggests that there is an individual level and relatively instrumental understanding of the term ‘volunteering’. This mirrors a more conventional environmental volunteering role, that is, volunteers do tasks assigned by the Environment Agency. This sits in tension with the growing focus on community action and community engagement and the many examples of FCRM volunteering being carried out at this level. The term ‘volunteering’ is not applied as frequently in this context or in examples where the Environment Agency has less direct input into volunteer management. There seems to be a conceptual divide between ‘volunteering’ and ‘community action’ or ‘community engagement’.

For example, during the baseline evidence survey of Environment Agency staff, a number asked for more guidance on the definition of volunteering. It became clear that, for some staff, volunteering meant only volunteers that the Environment Agency managed directly rather than volunteers within a community that maybe undertaking action as part of wider community activity or as part of a partnership with an organisation such as a local authority.

In addition, a report on ‘Community focused flood engagement’ commissioned by Environment Agency (TNS, 2013) indicated that the Environment Agency aims to move more towards ‘developing networks of actively engaged residents and stakeholders who plan and maintain activities to alleviate flood risk’. A wider government focus on localism and the Big Society is driving this shift. The idea is to:

- raise awareness of risk, and enable and encourage communities to take appropriate action
- gain buy-in to flood alleviation schemes

The report recognised the same three levels of volunteer activity as found in the evidence (individual, community and partnership) for this project. It went on to make a similar point about some confusion around the boundaries between volunteering and wider community engagement activity.

There are some important questions around these issues that should be explored as Forest Research works with the Environment Agency to develop an evaluation framework for volunteering. There are implications with regard to the definition of what is to be measured and evaluated, and there is a need to consider what is actually possible or realistic in terms of collecting evidence on volunteering within the Environment Agency’s organisational and operational set-up.

Forest Research feels there may not be a clear view across the Environment Agency of what constitutes ‘volunteering’ and how this fits into community engagement. It sought to bring these questions into the activities of Work Packages 2 and 3 so that it could start to explore any differences and commonalities to see if a common view can be obtained.



# 6 Findings

## 6.1 What evidence about FCRM volunteering exists and what does it tell us?

The descriptive statistics provided in this report refer to the counts of examples (cases) inputted into the spreadsheet. It is important to note that these do not necessarily represent a single site or the numbers of volunteers involved. For example, depending on the detail provided by FCRM teams and in the literature, a case could be a single group of flood wardens, or all the flood wardens for a county or Environment Agency operational area.

The cases were gathered in response to the questionnaire sent out to FCRM staff and from purposeful sampling of other sources. Consequently, responses are likely to have come back from those staff most engaged in volunteering activities within FCRM and do not represent the entire picture of all volunteering activity across the Environment Agency.

However, despite any potential bias, the data gathered emphasis flooding volunteering in order to meet the research objectives of this project. The data also include the most significant examples of other forms of volunteering with the Environment Agency that are connected with this flooding focus.

The baseline of 97 cases of volunteering activity comes close to the target of 100 cases as a suitable sample from which to draw meaningful conclusions.

## 6.2 Types of volunteering

A total of 12 distinct types of volunteering were identified from the baseline evidence (Table 6.1).

**Table 6.1 Volunteering types derived from baseline data**

<b>Type of volunteering (count of cases<sup>1</sup>)</b>	<b>What's involved in this type?</b>
Flood wardens (29) <sup>2</sup>	Act as eyes and ears on the ground to: <ul style="list-style-type: none"><li>• inform the Environment Agency of problems/river levels</li><li>• help in the creation of flood action plans</li><li>• raise awareness</li><li>• help vulnerable people</li><li>• warn residents if area likely to flood</li><li>• communicate with Environment Agency and act as point of contact,</li><li>• encourage people to register for free flood warnings</li></ul>
Flood volunteers (21)	This person is something more than a flood warden. It is someone getting involved in:

Type of volunteering (count of cases <sup>1</sup> )	What's involved in this type?
Flood alleviation (11)	<ul style="list-style-type: none"> <li>• emergency responses</li> <li>• planning</li> <li>• community emergency volunteers</li> <li>• river maintenance</li> <li>• bringing authorities together to raise funding</li> <li>• linked to flood groups</li> <li>• working with local landowners to look at long-term catchment issues</li> <li>• volunteering for different roles alongside other agencies</li> </ul> <p>These are mainly groups that mostly raise money or campaign for funding to contribute to capital schemes such as building infrastructure such as culverts, earth bunds, system of pipes to take away flood water on fields and pump into brook, and sluice gates. Sometimes the groups come together as a form of protest after a major flood to raise funds for coastal or river protection, and the creation of flood storage area.</p>
Habitat management (11)	<p>A focus on:</p> <ul style="list-style-type: none"> <li>• conservation</li> <li>• improving access to waterways</li> <li>• river clean-ups</li> <li>• enhancing the environmental quality of river and tributaries</li> </ul>
NEET (not in employment, education or training) (4)	<p>Young people primarily getting involved in conservation or other activities to improve their skills and employment opportunities.</p>
Citizen science (6)	<p>Includes:</p> <ul style="list-style-type: none"> <li>• divers gathering data</li> <li>• data gathering on weather</li> <li>• anglers monitoring river fly populations as indicator of river health</li> <li>• surveys of buglife</li> </ul> <p>This is a different category to monitoring due to the level of expertise of those gathering data.</p>
Coastal flood wardens (4)	<ul style="list-style-type: none"> <li>• Operating sea gates</li> <li>• Closing sea defences when required</li> <li>• Walkover surveys on the coast</li> </ul>
Awareness / campaign (3)	<p>Partnerships and organisations raising awareness, for example, Royal Voluntary Service or Lower Seven Community Flood information network.</p>
Monitoring (2)	<ul style="list-style-type: none"> <li>• Rainfall monitoring</li> <li>• Monitoring river blockages</li> </ul>

Type of volunteering (count of cases <sup>1</sup> )	What's involved in this type?
Lock-keepers (2)	Mainly on non-tidal stretch of River Thames and via the Canal and Rivers Trust Sometimes includes wildlife and habitat management.
Catchment walkover (1)	Checking water quality and any issues along specific rivers.
Catchment management (3)	Groups focused on wider catchment management for example, River Trusts.

Notes <sup>1</sup> Please note the explanation given that a 'case' represents an 'example' of an FCRM initiative. As such it may represent more than one site and it does not represent the numbers of volunteers involved.  
<sup>2</sup> This number represents the count of examples identified in the baseline evidence set.

### 6.3 Type of activity – mode and form

The majority of examples in the baseline evidence show that the FCRM mode of activity (a distinction is made between prevention, response, emergency<sup>2</sup>) is focused on **preventing** flooding and **responding** to flooding situations. Only flood volunteers, flood wardens and flood alleviation volunteering types include some focus on dealing with emergency flooding activity.

The main activities volunteers carry out include:

- **Knowledge activities** such as surveying a river in a catchment walkover, checking river gauges, monitoring water quality, pollution monitoring and collecting data as part of a citizen science project (51)
- **Campaign activities** such as raising awareness of flooding, flood planning, education work with schools and promoting uptake of the flood warden service (50)
- **Physical activities** such as embankment building, habitat management, opening and closing sea gates, and clearing drainage ditches and watercourses (41)
- **Virtual activities** – this accounted for only a small amount of activity such as remote monitoring or web-related action such as documenting the group's activities and providing information on web pages (5)

### 6.4 Volunteering segment

Three levels of volunteering affecting the nature of the volunteering experience, governance, the type of activity undertaken, motivations and benefits were identified (see also Appendix B). These were:

- **Individual engagement** – benefits accrued mostly to the individual who is motivated to take part for personal individual reasons rather than any other;

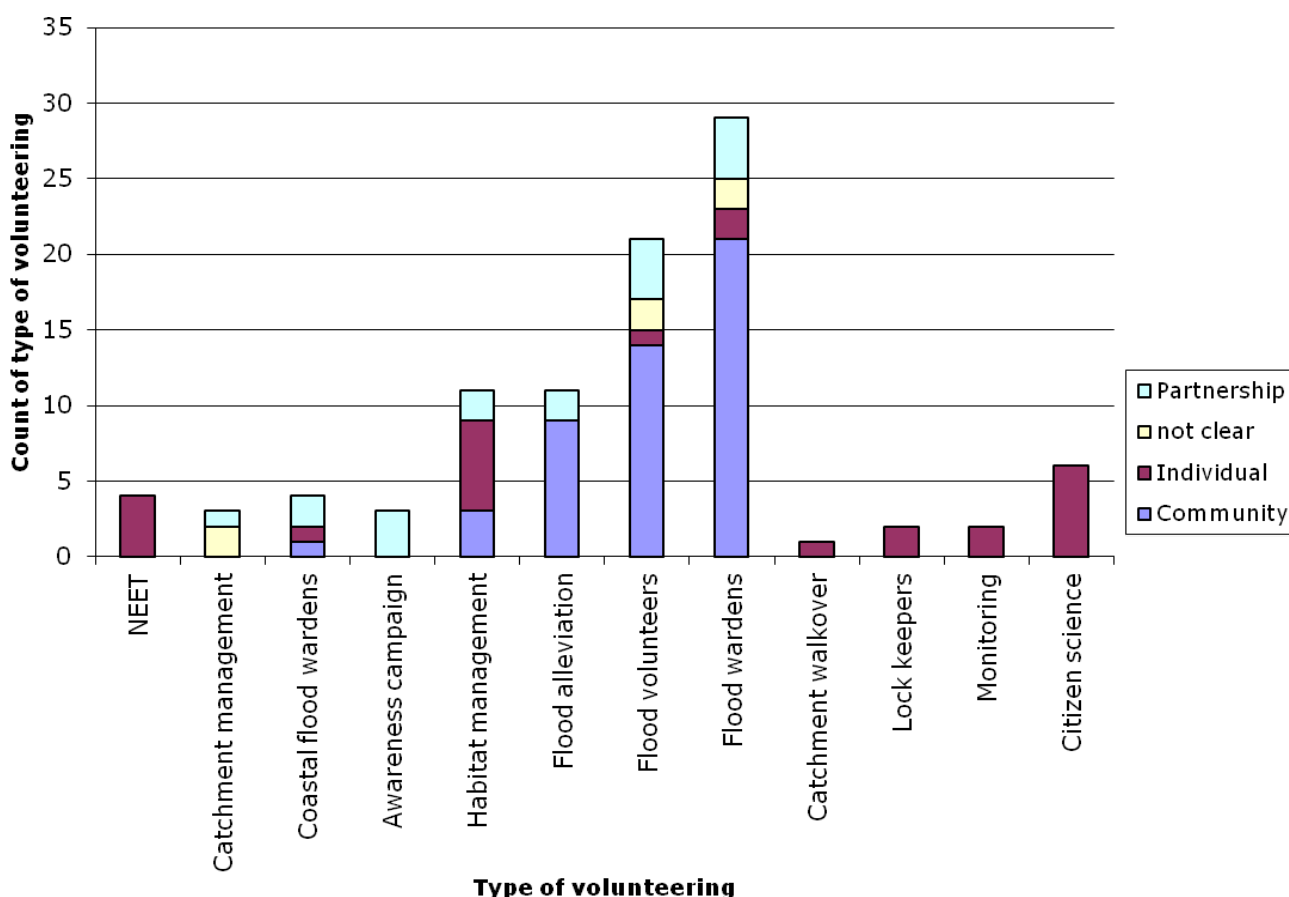
<sup>2</sup> Prevention is about risk mitigation actions. Response relates to risk readiness actions and Emergency relates to disaster management (see Appendix A).

the volunteer opportunity is usually managed by an organisation such as the Environment Agency

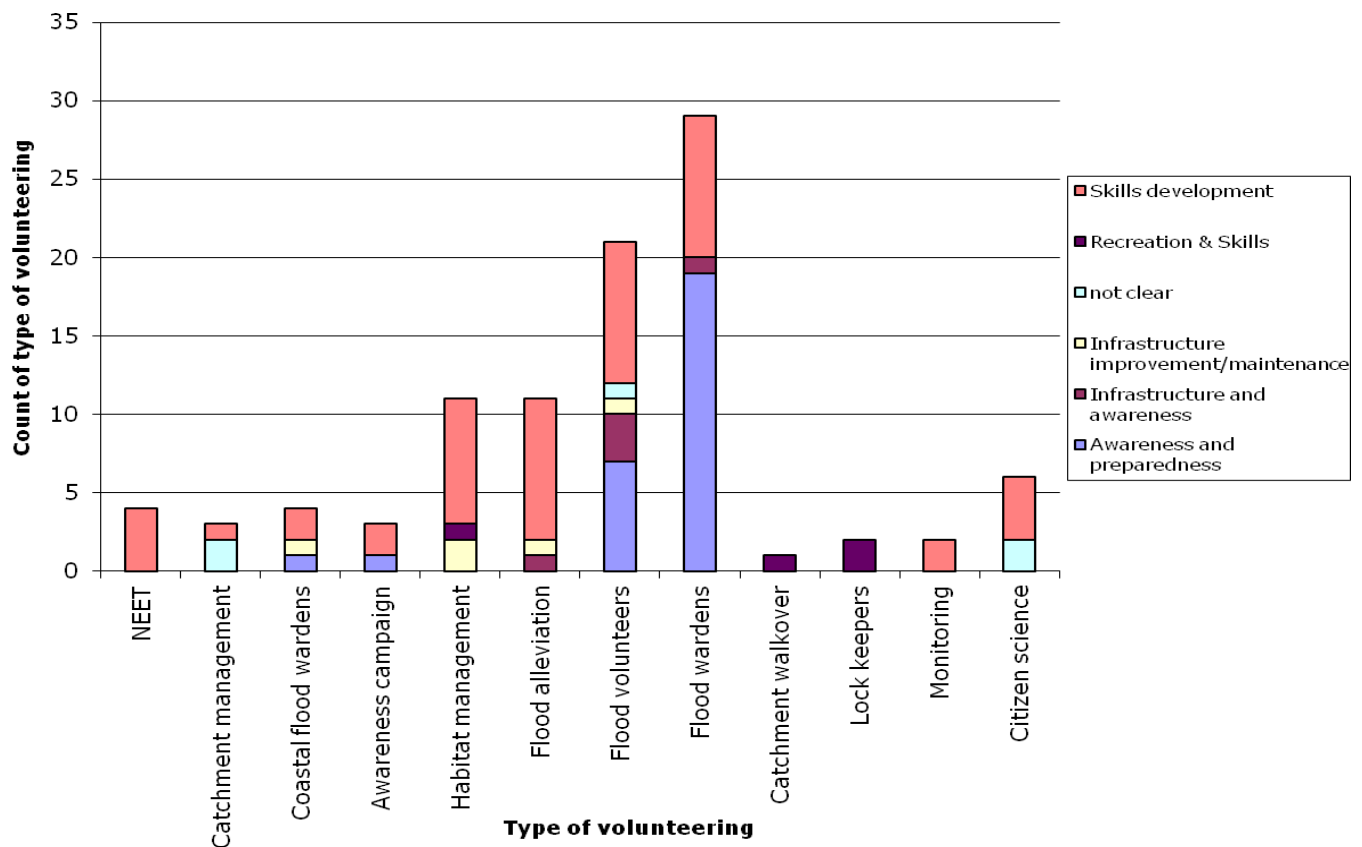
- **Community action** – volunteering is with and for the wider community, part of community action, and driven by the community, motivations and benefits accrue to the community more than the individual; volunteering is from the outset part of a multi-partner approach to FCRM issues, benefits and motivations
- **Partnership working** – involves a partnership of organisations, is driven by the partnership which may include the community through organisations such as parish councils; volunteers are motivated by individual and shared interests and benefits accrue to the partnership and the individual.

Figure 6.1 shows the results of this categorisation by the type of volunteering (from Table 6.1). The majority of flood alleviation, flood volunteer and flood warden volunteering is community focused, with the citizen science, catchment walkover, NEETs, lock keepers and monitoring volunteering coming from the individual wanting to take on a specific task.

Figure 6.2 illustrates the type of volunteer experience which is linked to people’s motivations for getting involved and outlines that skills development and awareness and preparedness are important for volunteers.



**Figure 6.1 Type of volunteering by level volunteering operates at (data taken from 97 examples in spreadsheet)**



**Figure 6.2 Type of volunteering by the volunteering experience offered (motivation)**

## 6.5 Number of FCRM volunteers

Responses from the Environment Agency’s FCRM teams gave rough estimates of the number of volunteers. For example, a response from one team was that there were 21 communities engaged in their area with 5–20 people involved in each one. A number of responses like this were received. By taking the lowest and highest numbers, a potential range of numbers of volunteers from approximately 1,700 to 3,500 people is obtained. It is not clear how up-to-date these figures are or whether the FCRM teams have further data which could provide a more accurate overall figure.

This calculation relates only to baseline information gained from the FCRM teams and not from other examples identified from web searches or the literature.

## 6.6 Governance and area of business

Each case of volunteering activity has been allocated to a specific part of the Environment Agency’s organisational structure.

The majority of cases (59) sit within the Area level Flood Risk Management team, with 42 of these in the Flood Resilience part of this team, 15 in Partnership and Strategic Overview, and 2 in Coastal.

The remainder of cases sit either within other Environment Agency departments such as Environment Management, Fisheries or Operations (14), across several

departments (15), have no direct Environment Agency involvement (3), or did not have enough information to be clearly allocated (6).

Flood wardens sit mainly within the Flood Resilience part of the Area Flood Risk Management team (26), with three cases sitting across departments.

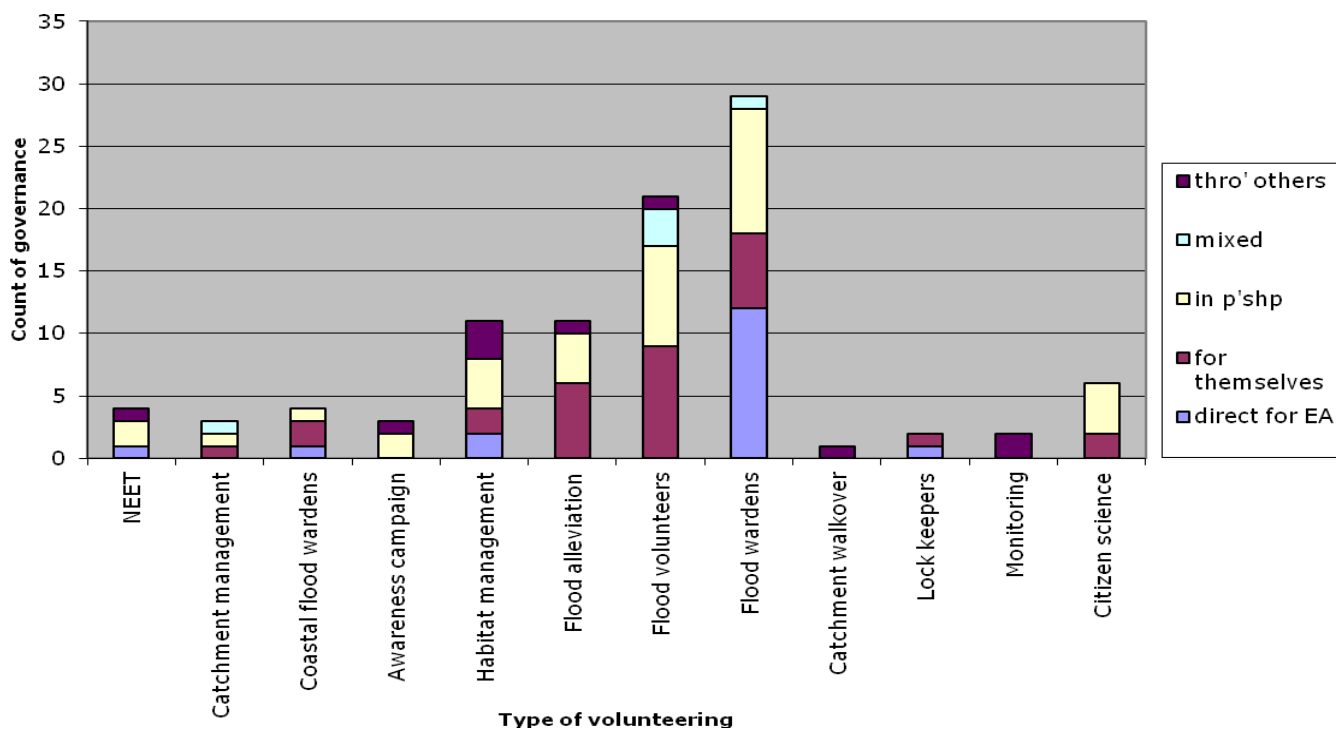
Flood volunteers also sit largely within Flood Resilience (12), with four in the Partnership and Strategic Overview part of the Area Flood Risk Management team, and five sitting across departments.

Flood alleviation volunteers are distributed across Flood Resilience (2), Partnership and Strategic Overview (6), Coastal (1), Fisheries (1) and across more than one department (1).

The Environment Agency’s definition of different types of governance was used to categorise each case of volunteering activity; full definitions of these types are given in Appendix B. Of the 97 volunteering cases:

- 17 are managed directly by the Environment Agency
- 36 are managed by a partnership of organisations which includes the Environment Agency
- 10 cases are where volunteers are managed by another organisation delivering outcomes for the Environment Agency
- 29 cases deliver outcomes which may benefit the Environment Agency but they are independently managed with little Environment Agency involvement
- 5 cases had an unclear or mixed governance

This categorisation is summarised in Figure 6.3.



**Figure 6.3** Type of volunteering by governance (see Appendix B for definitions)

## 6.7 Changing nature of volunteering over time

There has been a clear policy shift within the Environment Agency away from engagement with the public around awareness raising activities (that target the individual) and the recruitment of directly managed flood wardens (individual level volunteering) towards community engagement and the facilitation of community resilience initiatives and partnerships (community level volunteering and some partnership level volunteering). These aim to develop networks of actively engaged local residents, civil organisations and other agencies to plan and maintain activities that mitigate and respond to flood risk.

The flooding in 2007 and the Pitt review that followed in 2008 emphasised the need to focus much more on engaging with communities. Although many of the cases in the dataset do not have clear information on when volunteering activity started, those that do indicate a spike in community level volunteering in 2007 and 2008.

The national Floodwise campaign set out a strategy from 2009 to 2012 for flood engagement activities. Although this campaign has now ended, the cases included in the baseline data suggest that this approach has become embedded within the Environment Agency as a significant number of examples continue to operate at the partnership working and community action volunteering level.

## 6.8 How does the evidence relate to the wider body of segmentation research about volunteering?

As a part of the profiling and typology development, other volunteer segmentation studies were examined to:

- cross-check the relevance of the approach used in this project
- draw comparisons with other characterisations

A rapid search of the literature based on keywords ('volunteering' AND (segmentation\* OR social marketing OR characterisation\* OR typology OR motivations) AND (environment\* OR water\* OR flood\* OR river\* OR coast\*)) returned a range of papers, part of which were typological, with some segmentation analyses. None of these concentrated exclusively on environmental volunteers and none mentioned FCRM related volunteering.

Table 6.2 lists the most relevant UK, US and international studies along with a description of the identified volunteering 'types' or segments. The basis for these segmentation and characterisations studies varies and concentrates on:

- demographic variables to answer questions about whether volunteer social background affects motivation, engagement and types of activities undertaken
- social and lifestyle/cultural variables to answer similar questions about how far these cultural aspects of volunteers influence motivation and the types of activities undertaken or charitable sector people engage with
- personality (psychographic)
- values
- motivations

- function of the volunteering offer (activity/sector)

A few studies test these different ‘variable domains’ to gauge which have greatest influence over decisions to volunteer. For example, Wymer (2003) tests segmentation models using multiple variable domains with data about literacy volunteers. He found that ‘demographic, social-lifestyle and value domains offer utility in initial segmentation’ and provide partial explanations about why volunteers engage with and commit to the literacy volunteering offer. Hustinx et al. (2010) tested the cultural domain with social context, and mixed this with the demographic domain including education and employment data as main segmenting variables. They found that employment and education were more important when it came to understanding and clustering volunteering enrolment.

In all the studies reviewed there is little which adds any additional insights into the own typology development described in this report. One possible exception is the work by Goswami et al. (2011), which mirrors the volunteering levels identified as an important domain in the profiling exercise for this project. The levels they identify – community, individual, networking and social (Table 6.2) – combine variable domains which include motivations, benefits and volunteer function.

**Table 6.2 Main types of volunteering identified in characterisation and segmentation studies**

Clary et al. 1992 (Volunteering Functions Inventory)	Fisher and Cole (1993)	Bendapudi et al. (1996)	Handy et al. (2000)	Dolinciar and Randle (2007)	Randle et al. (2007)	Goswami et al. (2011)
Social	Psychological needs	Altruistic	Mutual support	Leisure	Social (social capital)	Social
Values	Conscious reasons	Egotistic	Service delivery	Political	Community (support community, maintain services)	Networking
Protective	Perceived benefits		Campaign / cause specific	Altruists	Altruistic (help others, set a good example)	Individual benefits
Esteem				Church	Enthusiast	Community benefits
Understanding				Other		
Career						



# 7 FCRM typologies of volunteering

A typology is a characterisation of particular aspects of an activity or group. An FCRM volunteering typology can help staff to consider volunteering from different angles to aid in decision making. It is a simplification of a number of key variables, including volunteering segment, and can support staff in making decisions about taking a more targeted approach to volunteer recruitment, retention, communication and management.

Discussions with the Environment Agency suggest there are two main objectives for using a typology/s, that is:

- to aid in the decision making process of how Environment Agency engages with volunteers
- to aid in evaluation of the volunteer experience (for example, benefits of volunteering)

It is clear that, given the gaps found in the baseline evidence, any typologies created may have to be adapted when some of these evidence gaps are filled through the case study research and in discussions with Environment Agency staff.

Based on the two objectives outlined above, three typologies are suggested. These have been developed these to ensure:

- they are grounded as far as possible in the baseline evidence gathered to date
- they are a characterisation that makes some initial sense to Environment Agency staff – based on discussion with the Environment Agency project manager and a member of the project board
- they are something that can be further refined in workshops with Environment Agency staff and via the case study research

The three typologies are presented in Figure 7.1 and Tables 7.1, 7.2 and 7.3.

The volunteering segment typology (Table 7.1) could potentially act at a higher strategic level that could be used within the Environment Agency nationally or regionally to aid discussions and decisions of where its main volunteering focus should be. From the review of the baseline evidence it appears that the Environment Agency is moving away from a focus on individual engagement to a greater focus on community action with more partnership working being developed.

The typology based on benefits to communities (Table 7.2) helps to provide an indication of why communities might be specifically interested in getting involved in volunteering activity.

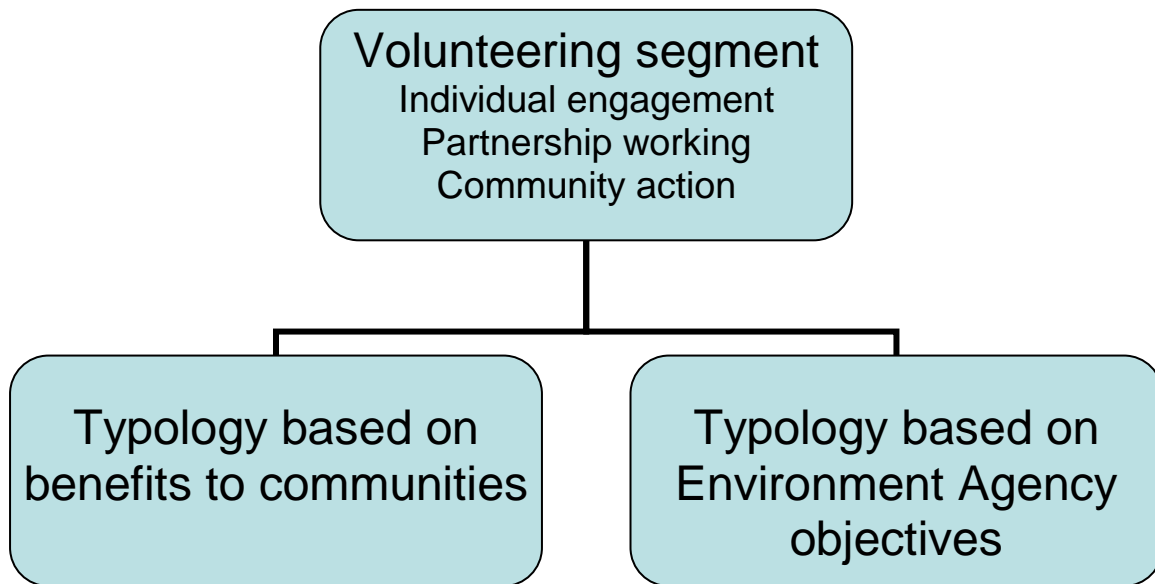
The typology based on objectives for the Environment Agency (Table 7.3) could assist Area teams in considering their most important objectives for volunteering, allowing them to be more targeted in their focus.

The typologies include key variables gained from evidence in the baseline review. These include:

- governance
- mode

- experience (motivation)
- volunteering type

Typologies based on volunteer types/functions and benefits to the individual were also discussed and developed as part of the research. But due to the complex nature of volunteering there is not one correct typology. A crucial issue is how the Environment Agency might want to use a typology or typologies. The three typologies shown in Figure 7.1 are those thought to be of most use to the Environment Agency; this choice will need to be discussed with a range of staff, as different roles will have varying requirements.



**Figure 7.1 Three typologies**

**Table 7.1 Volunteering segments typology**

<b>Volunteering segment types</b>	<b>Definition</b>	<b>Description</b>
Individual engagement	<ul style="list-style-type: none"> <li>• Power over decision making sits with the managing organisation (Environment Agency or other)</li> <li>• Organisation designs and offers a specific volunteering opportunity</li> <li>• Individuals come forward to take these roles motivated by individual motivations</li> <li>• Benefits accrue largely to the organisation and the individual volunteer</li> </ul>	<ul style="list-style-type: none"> <li>• Citizen science, habitat management and NEETS, and some flood wardens</li> <li>• Focused on prevention</li> <li>• Offers skills development volunteering experience</li> <li>• Governed by all governance types</li> <li>• Offers benefits to Environment Agency of knowledge transfer from it to the community and from the community to Environment Agency, performing tasks and capital scheme funding</li> </ul>
Partnership working	<ul style="list-style-type: none"> <li>• Power over decision making sits with a partnership of organisations, which may include the community through organisations such as the parish council</li> <li>• Partnership designs intervention and volunteering opportunities collaboratively</li> <li>• Volunteers are motivated by both individual and shared motivations</li> <li>• Benefits accrue to the partnership and the individual</li> </ul>	<ul style="list-style-type: none"> <li>• Flood wardens, flood volunteers and awareness campaigns</li> <li>• Focused on prevention and response</li> <li>• Offers awareness and preparedness, and skills development volunteering experiences</li> <li>• Governed in partnership or for themselves</li> <li>• Offers wide range of benefits to Environment Agency including knowledge channelled from it to the community, tasks achieved, community flood plans, increased trust of Environment Agency and community ownership of risk resilience and response</li> </ul>
Community action	<ul style="list-style-type: none"> <li>• Power over the decision making sits with the community</li> <li>• Intervention designed by the community and volunteers</li> <li>• Environment Agency and other organisations are involved, often in a largely advisory capacity</li> <li>• Benefits accrue to the community (and Environment Agency – increased resilience?)</li> <li>• Boundary between community member and volunteer is often blurred</li> </ul>	<ul style="list-style-type: none"> <li>• Flood wardens, flood volunteers and flood alleviation</li> <li>• Focused on prevention and response</li> <li>• Governed in partnership, or for themselves</li> <li>• Types of volunteers experience are awareness and preparedness, and skills development</li> <li>• Offers the widest range of benefits to the Environment Agency including: increased trust of Environment Agency; knowledge transfer from it to the community and from the community to it; community flood plans; developing partnerships; tasks performed; and community ownership of risk, resilience and response</li> </ul>

Notes: Variables include volunteering type, governance, mode and experience. Overlap exist in the descriptions.

**Table 7.2 Typology based on benefits to the community**

<b>Benefit types</b>	<b>Definition</b>	<b>Description</b>
Reducing risk	Habitat and catchment monitoring and clearing	<ul style="list-style-type: none"> <li>• Likely to be citizen science, catchment and habitat management, monitoring, some flood wardens</li> <li>• Likely to be volunteering segment of individual engagement</li> <li>• Likely to be focused on prevention</li> </ul>
	Building and operating infrastructure	<ul style="list-style-type: none"> <li>• Likely to be some flood and coastal wardens, lock keepers and flood alleviation volunteers</li> <li>• Likely to be both the volunteering segments of individual engagement (lock-keepers) and community action (flood alleviation)</li> <li>• Likely to be focused on prevention</li> </ul>
Increasing resilience	Understanding risk and Having a plan/ knowing what to do	<ul style="list-style-type: none"> <li>• Likely to be flood wardens, flood volunteers and awareness campaigns</li> <li>• Likely to be at the volunteering segments of partnership working and community action</li> <li>• Likely to be focused on prevention and response</li> </ul>
	Taking responsibility for managing risk	<ul style="list-style-type: none"> <li>• Likely to be flood volunteers and flood alleviation</li> <li>• Likely to be at the volunteering segments of partnership working and community action</li> <li>• Likely to be focused on prevention, response and emergency</li> </ul>
Increasing social capital	Connections between people/ reducing isolation	<ul style="list-style-type: none"> <li>• Likely to be flood wardens, flood volunteers and awareness campaigns</li> <li>• Likely to be at the volunteering segments of partnership working and community action</li> <li>• Likely to be focused on prevention and response</li> </ul>
	Community pride	<ul style="list-style-type: none"> <li>• Likely to be flood wardens, flood volunteers and awareness campaigns</li> <li>• Likely to be at the volunteering segments of partnership working and community action</li> <li>• Likely to be focused on prevention and response</li> </ul>
	Reduced anti-social behaviour	<ul style="list-style-type: none"> <li>• Likely to be habitat management and NEETs</li> <li>• Likely to be at the volunteering segment of individual engagement</li> <li>• Likely to be focused on prevention</li> </ul>
	Empowerment	<ul style="list-style-type: none"> <li>• Likely to be flood wardens, flood volunteers and awareness campaigns</li> <li>• Likely to be at the volunteering segments of partnership working and community action</li> <li>• Likely to be focused on prevention and response</li> </ul>

Notes: Includes variables – volunteering level, type and mode.

**Table 7.3 Typology based on Environment Agency objectives**

<b>What is Environment Agency trying to achieve?</b>	<b>Description</b>
Share knowledge – from community to Environment Agency	Volunteers act as eyes and ears of Environment Agency on the ground, and provide expert knowledge based on their local knowledge or specific skills. Volunteer activities are focused on prevention; this knowledge enables the Environment Agency to better manage risk. Includes flood wardens, flood volunteers and flood alleviation, as well as citizen science and catchment walkover. Involved primarily at a volunteering segment of individual engagement, and governed directly for Environment Agency or in partnerships.
Share knowledge – from Environment Agency to community	Environment Agency uses volunteers as a way to get information out to communities quickly and through a trusted messenger. This increases individual and community awareness of risk and leads to greater resilience. Includes flood wardens, flood volunteers and awareness campaigns. Activities are spread across prevention, response and emergency, and operating at the volunteering segment of individual engagement, community action and partnership working. Volunteers are governed directly by the Environment Agency, through partnerships, or for themselves.
Get specific tasks performed	Volunteers carry out tasks which enable the Environment Agency to meet its objectives. This includes flood wardens, coastal flood wardens, and flood alleviation volunteers, as well as NEETs and habitat management. The focus is on prevention for habitat and catchment management, and on response for flooding volunteers (for example, closing flood gates). Operating primarily at the volunteering segment of individual engagement and are governed directly by the Environment Agency or through others.
Capital scheme funding	Income is generated through both community fundraising for flood management schemes by flood alleviation volunteers, and through the Environment Agency being able to access grant funding because of the involvement of habitat management volunteers and other organisations. Focused on prevention and operating especially at the volunteering segment of partnership working. Governed for themselves or in partnership.
Develop partnerships	The Environment Agency is able to share the workload and make the most of others' expertise by developing new partnerships. Includes flood volunteers and habitat management volunteers, focused on prevention and operating at the volunteering segment of partnership working. Governed through others or in partnership.
Increase trust of Environment Agency within the community	The image and profile of the Environment Agency is improved through the local presence of flood volunteers and flood wardens on the ground. Working across prevention, response and emergency and at a partnership level. Governed for themselves or in partnership.
Create community flood plans	Volunteer involvement in community flood plans creates more effective plans based on detailed local knowledge and owned by the local community. includes flood volunteers and flood wardens focusing on response and emergency. working at the volunteering segment of partnership working, governed either for themselves or in partnership.
Create a sense of community ownership of risk, resilience and response	Communities taking responsibility for understanding and managing their own risk and resilience. includes flood volunteers, flood wardens and flood alleviation volunteers working across prevention, response and emergency. Volunteers operating at the volunteering segment of community action and partnership working and governed in partnership or for themselves.

Notes: Includes variables – mode, governance, volunteering level and type.

# 8 Sources of baseline evidence

## 8.1 Environment Agency strategy documents

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### 8.4 Guidance documents

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## 8.6 Questionnaire responses

Baseline data questionnaire responses were received in 2013 from:

- E. Crofts – Kent
- K. Fisher – Living Waterways North East
- L. Fraser – Community Flood Plan Lostwithiel Cornwall
- L. Fraser – Community Flood Plan Par St Blazey Cornwall
- L. Fraser – Shaldon Tidal Defence Scheme Cornwall
- L. Fraser – Teignmouth Tidal Defence Scheme South Devon
- L. Fraser – Yealmpton Emergency Plan Devon and Cornwall
- D. Graham – Cheshire and Lancashire
- J. Higgs – Solent and South Downs
- J. Jennings – Community Flood Wardens North East Thames
- G. Lindsay – Community Flood Wardens South West Yorkshire
- C. Marshall – Community Flood Wardens Blackhall Mill Newcastle
- C. Marshall – Community Flood Wardens Morpeth Newcastle
- C. Marshall – Community Flood Wardens Neasham Newcastle
- C. Marshall – Community Flood Wardens Ponteland Newcastle



- C. Marshall – Community Flood Wardens Rothbury Newcastle
- C. Marshall – Community Flood Wardens Skinnigrove Newcastle
- C. Marshall – Youth Offenders Newcastle
- R. McMahon – Parish Council Flood Warden Scheme Northern Area Anglian,
- N. Reed – Dorset and Wiltshire Flood Wardens
- D. Trewin – Midlands West
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# Appendix A: Simple characterisation of FCRM volunteer involvement to guide data capture.

This matrix was produced from early reading of the evidence. It formed the categories developed for the spreadsheet and the input of the full baseline evidence set.

	<b>Preventative</b> Risk mitigation actions	<b>Responsive</b> Risk readiness actions	<b>Emergency</b> Disaster management
Area of Environment Agency business	This should locate which part of the Environment Agency business the volunteer action is situated in. Even though the emphasis is on FCRM, other examples are useful for creating a typology and identifying cross over.  The Environment Agency organogram informs this box.		<b>NB These kinds of volunteers are not a priority focus unless they are linked with other groups in some way.</b>
Type of volunteer work undertaken	Doing things which reduce or manage risk of flooding or breach of coastal defences. This would include actions such as embankment building and maintenance, debris clearing, catchment and watercourse surveying, organising community and individual flood plans.  <b>The activities can be:</b> <ul style="list-style-type: none"> <li>• <b>Physical</b> – for example, embankment building</li> <li>• <b>Knowledge</b> – for example, survey</li> <li>• <b>Campaign</b> – for example, flood planning, awareness raising</li> <li>• <b>Virtual</b> – for example, remote monitoring,</li> <li>• <b>Other</b> – that is, anything else</li> </ul> <b>Primary objective</b> What is the essential purpose of the volunteer work?  Taking note of any information about: <ul style="list-style-type: none"> <li>• <b>Where</b> – location, catchment, watercourse?</li> <li>• <b>Who</b> – takes part, any socioeconomic information?</li> <li>• <b>When</b> – how often, which season/time, how often?</li> <li>• <b>Why</b> – any information about motivations or reasons for volunteering?</li> </ul>	Doing things which respond to a predicted or potential flood or coastal incident for example, shutting flood gates, informing community members  The activities are as outlined in previous column  Take note of who, when, how as in previous column	Doing things to help deal with a civil emergency or disaster (for example, first responders)  The activities are as outlined in previous column  Take note of who, when, how as in previous column

	<b>Preventative</b> Risk mitigation actions	<b>Responsive</b> Risk readiness actions	<b>Emergency</b> Disaster management
Organisations involved	Which other organisations are involved with the volunteers?  List partner organisation and any others involved	As in previous column	As in previous column
Inputs (time and money, and so on)	Is there any information about the time, money, costs or other resources used to manage or support the volunteers? Record any values where they exist.	As in previous column	As in previous column
Governance	Use Environment Agency classification to categorise the mode of volunteering:  <ul style="list-style-type: none"> <li>• <b>Direct</b> – Environment Agency manages volunteer/s</li> <li>• <b>In partnership</b> – Environment Agency manages volunteers in partnership with another organisation/s</li> <li>• <b>Working through</b> – Environment Agency objectives met through a third party organisation</li> <li>• <b>Working for themselves</b> – little/minimal Environment Agency involvement but actions contribute to Environment Agency objectives</li> </ul>	As in previous column	As in previous column
Outcomes	Use evidence mentioned in report/case study etc. to list any outcomes/benefits to:  <ul style="list-style-type: none"> <li>• <b>Environment Agency</b> – for example, fulfil statutory duty? Contribute to Water Framework Directive or FCRM strategy?</li> <li>• <b>Partner organisations</b> – for example, as above</li> <li>• <b>Individual volunteer</b> – for example, personal development, protection of property</li> <li>• <b>Wider community</b> – for example, greater community awareness, identification of vulnerable people, risk to property reduced</li> </ul>	As in previous column	As in previous column
Gaps?	Is there any mention of possible points of partnership/Environment Agency involvement or ways in which the volunteer working can be extended?	As in previous column	As in previous column

# Appendix B: Profiling matrix

The coloured text indicates areas where there is baseline evidence from the 97 FCRM examples.

<b>Who</b>	<b>Volunteering level/ segment</b> <ul style="list-style-type: none"> <li>• <b>Community</b> – volunteering is with and for the wider community, part of community action, and driven by the community; motivations and benefits accrue to the community more than the individual; and volunteering is from the outset part of a multi-partner approach to FCRM issues, benefits and motivations</li> <li>• <b>Individual</b> – benefits accrued mostly to the individual who is motivated to take part for personal reasons rather than any other; the volunteer opportunity is usually managed by an organisation such as the Environment Agency</li> <li>• <b>Partnership</b> – involves a partnership of organisations, is driven by the partnership which may include the community through organisations such as parish councils; volunteers are motivated by individual and shared interests; and benefits accrue to the partnership and the individual.</li> </ul>	<b>Experience of flooding</b> <ul style="list-style-type: none"> <li>• <b>Experienced</b> = Regular Flooders for example, people who have experience flooding on a number of occasions and those that have other flood and coastal experience</li> <li>• <b>Inexperienced</b> = Irregular flooders that is, those with little experience of flooding</li> <li>• <b>Lack of understanding</b> = Those that have not been flooded, have received information and do not understand the risk</li> <li>• <b>Information Deficit</b> = Those that have not been flooded and have not received the information</li> </ul>
<b>Why</b>	<b>Experience type</b> Risk mitigation through awareness and preparedness Risk mitigation through infrastructure improvement Recreation and skills	<b>Commitment</b> High Medium Low
<b>What</b>	<b>Mode</b> <ul style="list-style-type: none"> <li>• <b>Prevention</b> – is about pre-flood activity</li> <li>• <b>Response</b> – relates to during flood event activity</li> <li>• <b>Emergency</b> – relates to post-flooding activity</li> </ul>	<b>Activity</b> <ul style="list-style-type: none"> <li>• <b>Physical</b> – such as embankment building, habitat management, opening and closing sea gates, clearing drainage ditches and water courses</li> <li>• <b>Knowledge</b> (monitor or citizen science) – such as surveying a river in a catchment walkover, checking river gauges, monitoring water quality, pollution monitoring, collecting data as part of a citizen science project</li> <li>• <b>Campaign</b> – such as raising awareness of flooding, flood planning, education work with schools, promoting uptake of flood warden service</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Virtual</b> - this accounted for only a small amount of activity such as remote monitoring or web related action</li> <li>• <b>Other</b> – anything not covered above</li> </ul>
<b>Where</b>	<p><b>Part of business</b></p> <p>FRM – Flood Resilience (Area)  FRM – Coastal (Area)  FRM – Partnership and Strategic Overview (Area)  Waterways (Area)  FRM – Forecasting &amp; Modelling (Region)  FRM – Incident &amp; Emergency (Region)  Communication &amp; Engagement (National)  No engagement  Other  Not clear</p>	<p><b>Risk level</b></p> <p>High  Medium  Low</p>
<b>How</b>	<p><b>Governance</b></p> <ul style="list-style-type: none"> <li>• <b>Working directly for Environment Agency</b> = where the Environment Agency specifically engages and manages volunteers to deliver outcomes directly for it, such as over 80 volunteers on its navigations, around 900 flood wardens and the 2,000 people who measure rainfall.</li> <li>• <b>In partnership</b> = where the Environment Agency works in a partnership with one or more organisations to achieve shared outcomes. This is achieved totally, or in part, through volunteers.</li> <li>• <b>Working through others</b> = where the Environment Agency asks another organisation to deliver outcomes for it and they are wholly responsible for the delivery through the volunteers they engage and manage. This may be through grants or contracts in the future.</li> <li>• <b>Working for themselves</b> = the outcomes may benefit Environment Agency or it may use the information generated. Examples include: data collected by individuals, put on to the National Biodiversity Network, and then used by the Environment Agency; locally organised flood groups delivering activities that help protect their properties; and the Environment Agency allowing communities to operate its structures for themselves. The Environment Agency may offer advice to people wanting to carry out activities.</li> </ul>	



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