



SCOTTISH EXECUTIVE

**Valuing the Water Environment:
An Investigation of Environmental
Attitudes and Values to Inform
Implementation of the
EC Water Framework Directive**

Environment Group



**VALUING THE WATER ENVIRONMENT:
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FRAMEWORK DIRECTIVE**

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EXECUTIVE SUMMARY

Background

1 The Water Framework Directive (WFD) was passed by the European Union in 2000 and is being implemented in Scotland through the Water Environment and Water Services (Scotland) Act 2003. A key aspect of the WFD is effective public participation and consultation.

2 The Scottish Executive commissioned Ipsos MORI to undertake qualitative research to gather and explore the opinions and priorities of the Scottish public in regard to the quality of the water environment, and to explore how the public might be effectively engaged in issues about the water environment¹.

3 The research consisted of seven focus groups with members of the general public. To inform these focus groups, ten in-depth, one-to-one interviews were undertaken with stakeholders (representatives from industry, environmental, farming and community interest groups), who were approached as informed members of the public rather than as representatives of a particular organisation.

Main Findings

Water quality and water quantity

4 The focus group participants echoed the views of most of the stakeholders interviewed in that they thought that Scotland has good water quality – the water to drink in Scotland was thought to be superior to that of other countries and many participants mentioned the quality of lochs, rivers and the coast. The quantity of water in Scotland was also generally thought to be good by both the public and stakeholders. However, some members of the public did refer to pollution, particularly the water environment in urban areas, and the stakeholders also pointed to areas which have a problem with water supply.

5 The main issue for the public was that *drinking water* should be of consistently good quality. There were concerns about the degree to which the water supply was “tampered with”, for example, through the addition of chlorine and fluoride.

Threats to the water environment

6 For the stakeholders, the biggest threat to Scotland’s water environment was thought to be pollution, mainly diffuse pollution from farming. Other concerns included abstraction and point source pollution.

7 The public also felt that pollution was a threat to the water environment, although they rarely mentioned diffuse pollution. Instead, their focus was on point source pollutants

¹ This project is the third phase in a programme of research to gauge public awareness and opinion in relation to the water environment. A public attitudes survey and literature review were also published by the Scottish Executive (<http://www.scotland.gov.uk/Topics/Research/Research/17692/SocialResearchPubs/EnvironmentGroup>).

such as rubbish. Another concern for the public was over-development, both in terms of the strain on water supply and increased sewage output.

Priorities

8 Priorities for the water environment tended to mirror what people thought were the main threats. Stakeholders highlighted the need to reduce diffuse pollution and many felt that the worst areas (urban and heavily farmed) should be prioritised. When the public were directly asked for their priorities, two themes emerged: maintaining the drinking water supply and, again, efforts to bring the worst areas up to standard. No clear hierarchy expressing any prioritisation of economic, social or environmental considerations emerged.

WFD: communication, implementation, education and engagement

9 Stakeholders were positive regarding the communication and consultation on the WFD they had received from the Scottish Executive and the Scottish Environment Protection Agency (SEPA). However, their views on implementation plans were more mixed: most were positive and particularly welcomed the holistic management of whole river basins and the fact that broad environmental criteria would be taken into account; others felt that, as most of Scotland's water environment is very good, the WFD implementation is unnecessary.

10 In the focus groups, the public were given a brief description of the WFD and asked for their reaction. They were generally positive as they felt the state of the water environment is important and the WFD should help improve or maintain standards. However, a number of concerns were evident:

- some of the concepts used by the WFD, such as “good ecological status”, were thought to be vague.
- there were concerns about the costs of implementation.
- although they felt that the WFD sounded good in principle, there were doubts over how effectively it would be implemented.
- local knowledge of the water environment and local issues were thought to be more important than decisions made in Edinburgh or Brussels.
- there was scepticism over whether other countries would adhere to the legislation to the same extent as Scotland and the rest of the UK.

11 A scenarios exercise was used in the focus groups to try to establish the public's priorities for the WFD. While some priorities emerged as a result of this exercise, they were not consistent. Many placed the environment first, while some prioritised other areas (such as employment or domestic water supply) depending on the specifics of the scenario.

12 In discussing the scenarios, what did emerge were priorities for the decision-making *process* – questioning and clarifying, exploring the possible options, seeking compromise, solutions and exploring ways to mitigate effects on disadvantaged parties (such as compensation for farmers). This can be likened to the way in which informed advisory groups decide upon priorities and has positive implications for engaging the public in WFD implementation.

13 When asked for their expectations of how the public could be engaged with the WFD, stakeholders anticipated a number of potential challenges:

- a lack of interest among the public;

- the absence of specific plans;
- the scale of current area advisory groups, which were thought to be too large, which might hinder engagement at a meaningful, local level;
- potentially off-putting terminology and a perceived lack of knowledge on the part of the public; and
- how to ensure representative involvement.

14 Many of these points were borne out by the focus group work – both in terms of what the people said in the discussions and our experience of the process of trying to engage people on the issues. Nonetheless, it is worth noting that the members of the public were all able and willing to talk about the water environment for over an hour in the focus group discussions. This indicates that careful planning and consideration of how the public can be involved in WFD implementation could lead to successful consultation. Important issues regarding public involvement that have emerged during this research are:

- there is potential to build on the importance and pride felt about the quality of Scotland’s water. Evidence from the focus groups suggests that the public may well be receptive to messages about *maintaining* our high standards and *protecting* one of Scotland’s key assets.
- there is a need to educate the public (perhaps through awareness raising campaigns) on what constitutes the broader water environment and what, in addition to pollution, can damage it.
- it may be more effective to engage people at the outset by tapping into the existing interest and concern about the environment in general – rather than specifically mentioning the ‘water environment’.
- the public should be involved at an appropriate stage - when there are specific, tangible issues to be discussed rather than more abstract principles.

Finally, and most importantly,

- engaging people at a *local* level, so that they have an interest in the issues and they can see the actual impact of any improvements, would be most meaningful.

Conclusion

15 Overall, this research indicates that both the public and the stakeholders consider Scotland to have good water quality and water quantity. That said, both groups identified current and potential threats to Scotland’s water environment and their priorities for the future were mostly based on these concerns.

16 One of the aims of the research was to explore whether and how the public could be engaged in the ongoing implementation of WFD. The focus group participants were clearly engaged, interested and happy to discuss the issues for at least an hour and a half - suggesting that it *is* possible to generate public involvement.

17 However, there are issues that must be considered if public engagement in the WFD is to be successful and take account of local social and economic issues. In particular, meaningful engagement would be at a local level, at an appropriate stage, i.e. when there are specific tangible issues to be discussed rather than more abstract principles, and should be representative of the whole community.

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 The Scottish Parliament has passed national legislation, the Water Environment and Water Services (Scotland) Act 2003, to implement the EC Water Framework Directive (WFD). The WFD is one of the first European regulations to explicitly demand a high degree of public and stakeholder involvement in its implementation. Accordingly, the Act places the people of Scotland at the heart of managing the water environment and an open participatory process was adopted during the development of the legislation.

1.2 In support of the longer term implementation of this legislation, the Scottish Executive commissioned Ipsos MORI to undertake qualitative research to gather and explore opinions and priorities of the Scottish public in regard to the quality of the water environment, and to explore how the public might be effectively engaged in issues about the water environment, in order to inform policy decisions. Stakeholders' opinions were also elicited, with stakeholders approached as informed members of the public rather than as representatives of a particular organisation. This report presents the findings from this research.

Policy Background

1.3 The WFD was passed by the European Union in 2000. It has two key components. First, it requires us to manage our water environment on the basis of units that make sense in environmental terms - River Basin Districts that include all interdependent rivers, lochs, estuaries, coastal waters and associated underground waters. A plan is to be drawn up for each River Basin District setting out where there are environmental problems and what will be done to tackle them. Second, it requires that all impacts on the water environment, physical, polluting and otherwise, are controlled, with the aim of achieving 'good' ecological status for most water bodies by a specified deadline - 2015 in most cases.

1.4 The WFD differs from previous legislation in a number of ways. Most importantly, it sets out a framework whereby decisions on the water environment should be set in the context of wider ecological issues, while being cognisant of local environmental, economic and social considerations. It has moved from using narrow chemical parameters for measuring water quality to wider ecological parameters, such as the shape of water bodies, volume of water, and impact on wildlife. Crucially, the WFD recognised that in order to ensure successful implementation, effective public participation and consultation was essential.

1.5 The WFD is being implemented in Scotland through the Water Environment and Water Services (Scotland) Act 2003. While the vast majority of Scotland's rivers, lochs, estuaries, coastal waters and groundwaters are of high quality, problems do exist. Moreover, Scotland's water has a wide range of uses and users and carries crucial importance to Scotland's image abroad.

1.6 To inform and support implementation of this legislation, the Scottish Executive has been undertaking a substantial programme of research. Much of this has been scientific and concerned with regulation, but, in 2006, it commissioned a suite of social research projects to gauge public awareness and opinion in relation to the WFD and to the water environment in general. The first two phases of this research, a public attitude survey (Martin, 2006) and a

literature review of Scottish and international research (Dalrymple, 2006) were published by the Scottish Executive. The main findings from these are broadly similar:

- the attitude survey found that the public think the Scottish water environment is important, is generally of good quality and is likely to stay that way;
- the literature review concluded that water quality was the most important priority in terms of the water environment.

1.7 The third phase of this research, the findings of which are summarised in this report, was to explore public attitudes in more depth. The focus of this project was to investigate how the general public could be engaged in concerns about the water environment. Qualitative methods were used to elicit the degree of priority people place on an ecologically sound water environment and the choices they would make on the basis of this. To help design and inform this work, interviews were undertaken with informed stakeholders to explore their views as individuals and their expectations for public understanding and involvement.

Research Aims and Objectives

1.8 The overall aim of this project was to elicit the degree of priority people place on an ecologically sound water environment and the choices they would make on the basis of this, in the face of possibly competing environmental, social and economic concerns.

1.9 The key objectives were to explore and assess:

- perceptions of what the water environment means to people;
- the relative values which are placed on different attributes of the water environment, including location;
- whether the views of different groups of people vary in significant ways and what factors influence shared and divergent views;
- the choices people make about how and whether to maintain, improve or pay no attention to particular water environments and the factors that would feature in their decision-making;
- the effectiveness of the methods that have been employed in the research and suggest approaches for ongoing engagement with stakeholders and members of the public throughout implementation of the WFD.

Methodology

1.10 This research project had two phases:

- 10 in-depth interviews with stakeholders; and
- 7 focus groups with the general public.

1.11 The in-depth interviews with stakeholders were conducted between 5 October and 24 October 2006. A list of potential stakeholders, most of whom were members of the National Stakeholders Forum, was identified by the Scottish Executive. Letters from the Ipsos MORI research team were sent to 10 of these and followed up by telephone to make appointments for interviews.

1.12 The stakeholders had already been involved in considerable consultation over the WFD, and continue to be consulted through the National Stakeholder Forum (NSF). The NSF, which was formed to oversee the introduction of the WFD in Scotland, includes senior representatives from industry, environmental groups, and farming and community interests. The Forum provides advice to Scottish Ministers on any aspect of WFD implementation in Scotland and presents information to key stakeholders on the introduction of the WFD. It has been fully involved in the implementation process. Thus, for the purposes of this project, stakeholders were asked to respond in the interviews as informed members of the public rather than representatives of their organisation. This was to minimise repetition of conversations they may have already had about the implementation of the WFD and to gain a fuller picture of their individual views on priorities for the water environment. It had the further purpose of helping to inform how the focus group work with the public should be carried out, particularly in terms of topic guide development.

1.13 The focus groups were conducted between 7 November and 14 November 2006. Members of the public were recruited by experienced interviewers who were provided with a set of recruitment instructions, including quota details, to aid in the targeting of prospective participants. To ensure maximum attendance at the groups, participants were given £25 to cover expenses.

1.14 The groups were held at various locations across Scotland. The rationale for selecting particular geographical areas was mainly based on providing a balance of urban, small town and rural areas as well as a range of local water environments (coastal, inland with river, inland by a loch). After taking these into consideration, we specifically picked Aviemore because of recent over-development in the area and Scotlandwell because of the well-publicised pollution problems with nearby Loch Leven.

1.15 The segmentation of the groups and details of focus group locations are shown in Table 1 below. It was designed to provide breadth across the different groups but relative homogeneity in terms of age and social class within each group. This was important to ensure that participants felt relaxed and uninhibited.

Table 1: Segmentation and location of groups

Location	Water environment	Urban/rural	Age	Gender	Social class²
Glasgow	Inland/river	Urban	Under 40	Mixed	C2DE
Glasgow	Inland/river	Urban	Over 40	Mixed	ABC1
North Berwick	Coastal	Small town	Over 40	Mixed	C2DE
North Berwick	Coastal	Small town	Under 40	Mixed	ABC1
Aviemore	Inland/river	Rural	Under 40	Mixed	C2DE
Aviemore	Inland/river	Rural	Over 40	Mixed	ABC1
Scotlandwell (areas of inland rural Fife near Loch Leven)	Inland/loch	Rural	Over 40	Mixed	C2DE

² This system of classification is known as “social grade”. Social grade classifies everybody on the basis of the chief income earner in their household, into one of six categories, A, B C1, C2, D or E. The ABC1s, can be loosely classed under the heading "middle class", and the C2DEs as "working class" (Market Research Society, 2006).

1.16 Discussion guides were developed for the interviews and focus groups. Topics covered were broadly similar for the stakeholders and the general public. The topics included:

- current state of the water environment in Scotland
- threats to the water environment
- views on the WFD
- priorities for improvement of the water environment
- public involvement.

1.17 Additionally, a scenarios exercise was used in the focus groups to help identify priorities for the WFD and water environment (see chapter five). The full discussion guides are included in the Appendix.

1.18 With the permission of participants, all discussions were recorded and then transcribed for analysis. XSight (a qualitative analysis software package) was used to organise, code, search and retrieve the text.

Structure of report

1.19 This report presents the findings from the stakeholder interviews and the focus groups with the public. Chapter 2 sets the context by discussing knowledge and understanding of the water environment. Chapter 3 explores people's concerns about the water environment and the various threats to it. Chapter 4 covers views on the WFD. Chapter 5 looks at the priorities for the future of the water environment. Chapter 6 considers views on the best ways to involve the public in implementation of the WFD. Each of these chapters is structured with the stakeholders' views presented first, followed by the public's views. The final chapter summarises the key findings and discusses the main implications for implementation of the WFD.

CHAPTER 2: KNOWLEDGE AND UNDERSTANDING OF THE WATER ENVIRONMENT

2.1 This chapter provides a context to the subsequent chapters on views on the implementation of the WFD by examining people's general knowledge and understanding of the water environment. It begins by discussing the opinions of the key stakeholders before moving on to look at the public's views.

Knowledge and understanding of the water environment among stakeholders

2.2 As the stakeholders are frequently involved in discussions about the WFD, it was not necessary to begin the discussions by defining the water environment and what it means to them. Nevertheless, some stakeholders spontaneously described the importance of the water environment in Scotland and spoke of the necessity to maintain standards.

Water is the fundamental natural resource because without water we can't grow food and we can't produce food.

(Stakeholder 5)

Water is the substance of life in many ways and it is important that we maintain the quality of that water.

(Stakeholder 9)

2.3 The view that Scotland's water environment was very good or excellent was widespread, which corresponds with the results of the public attitude survey conducted as part of this programme of research (see Martin, 2006). For the most part, both the quality of water and the quantity of water in Scotland were thought to be good. Those who thought the quality of water was good tended to refer to the relatively low amounts of heavy industry and agriculture that Scotland supports. It was also believed that water quality had improved over the past 20 years or so because of measures that have been taken to reduce pollution and to protect river courses.

I think with very few exceptions, the quality of the water is very good. In many cases it's excellent.

(Stakeholder 5)

I think we are blessed still with a high quality water environment...if you'd asked me a decade ago I would have been concerned about the impact on water quality, but guidelines have been introduced which are far better to protect river courses. So I think things are improving actually.

(Stakeholder 9)

2.4 Likewise, many stakeholders asserted that there were not, and not likely to be, any problems with water quantity in Scotland. It was generally thought that homes in Scotland have a reliable water supply and this is not likely to be threatened. One even suggested that climate change would mean wetter seasons in Scotland which would benefit the water supply.

2.5 On the other hand, a few stakeholders were less positive about the state of the water environment. While the water environment may be good overall, there are some areas that suffer badly from pollution and others which have potential problems with water supply.

Specific mention was made of the cryptosporidium scare at Loch Katrine in 2000 and water shortages in parts of the Highlands, Tyndrum and Dundee.

I think when you get to the Highlands and the northwest of Scotland then there's more of a risk of running out of water, but that's just because of the size of the sources rather than a sort of general misuse of water.

(Stakeholder 3)

I would agree with the public that overall it is pretty good but I would caveat that phrase by saying that a) where it's not very good it can be very bad...and there's a lot to be done. And secondly, just looking at a piece of water at the moment and saying "how is that?" does tend to ignore past losses.

(Stakeholder 4)

2.6 As the above quote shows, one stakeholder was additionally concerned about water bodies that no longer exist. He argued these were being ignored and indicated that the current water environment was poor in comparison to the past. However, this view was not shared by other stakeholders.

2.7 The stakeholders were almost unanimous in thinking that Scotland has better water than the rest of the UK and most of the rest of Europe. Countries thought to have particularly bad water quality were those in eastern or central Europe while countries in southern Europe were believed to have problems with water supply. Stakeholder 4 thought that Scotland's water environment does not compare favourably with Northern Scandinavia or under-developed parts of Portugal, where there have been fewer losses.

Stakeholder reactions to the findings of the public attitudes survey

2.8 During the interviews, the stakeholders were given a brief summary of the findings of the public attitude survey³ to read in advance of the interview. The most notable findings were:

- People thought the quality of water in Scotland is generally very good and they are not worried about water shortages over the next five years.
- Although they think the water environment is important, it is considered less important than other environmental issues such as climate change, recycling and energy efficiency.

2.9 Overall, the stakeholders were not surprised by the findings. Some expressed disappointment that the water environment was not considered important relative to other environmental issues. Stakeholders also noted that the public did not appear to make links between the water environment and other general threats to the environment such as climate change and energy; they did not seem to recognise that climate change would also threaten the water environment.

³ The full report, entitled "Valuing the Water Environment: A Survey of Scottish Public Attitudes", is available at: <http://www.scotland.gov.uk/Publications/2006/10/23141730/0>

The linkages aren't made. So people see climate change and global warming as a big issue but they don't necessarily see that that actually leads to water issues.

(Stakeholder 4)

I think what surprised me a wee bit was that people are all genned up to the notion of climate change and the importance of climate change but I was a bit disappointed to see the [low] degree of understanding of how important the water is.

(Stakeholder 9)

2.10 The level of awareness among the general public was considered to be about right by some stakeholders and too low by others. There was a prevailing view that the public do not understand what the threats on the water environment are and how to address them. Some stakeholders commented that more awareness and understanding of this would be especially useful in getting the public to think about the implications of their water use and then change their behaviour.

On the conservation side of it, they're not tending to think about the effect of global warming, greenhouse gases... they're just thinking well, we've got loads of water in Scotland, why do I need to conserve it?

(Stakeholder 8)

2.11 In line with their own views, stakeholders thought that the public would perceive the water environment as good or very good. In general, however, stakeholders thought that knowledge and understanding of the water environment would not be high amongst the general public. This was based to some extent on the findings of the public attitude survey but some stakeholders also thought that there was no incentive for the public to know more about the water environment as there is not much fear of water shortages and the current method of charging for water usage does not reflect people's consumption.

I think the general perception of people is that the water environment is pretty good.

(Stakeholder 3)

I think there is an awful lot of assumptions made about water...if we start moving towards a situation where water tax goes up and up people will think more about the water environment.

(Stakeholder 9)

Knowledge and understanding of the water environment among the public

2.12 The group discussions began by asking what people liked about Scotland's landscape in general and what they thought of the state of the environment. This was felt to be a more appropriate beginning for the discussion than leading with the water environment specifically. First, because it would inform on the relative importance of the water environment considered in the context of the environment in general and second, because it was something participants would be likely to know more about and thus be more comfortable discussing.

2.13 All of the groups mentioned water bodies spontaneously, indicating that water is seen as an integral part of Scotland's landscape. There was a sense that many of the participants placed considerable value on Scotland's water – both in terms of its appearance and the good quality of the water to drink.

One of the big topics is that it is critical to the Scottish landscape. I mean water is part of our scenery.

(Aviemore, over 40, ABC1)

2.14 When talking about the state of the environment most of the focus was on other aspects of the environment such as pollution from industry and urban pollution. However, some groups did mention water; either to discuss perceived problems with sewage or to mention parts of the water environment that they felt had improved over the last few years.

Water and sewage, I think that's poor here.

(Aviemore, over 40, ABC1)

There are specific hot spots like the overuse of fertiliser and washing off fuels into rivers, polluting rivers.

(North Berwick, over 40, C2DE)

2.15 To introduce discussion on the water environment participants were asked to name the different types of water bodies present in Scotland. When the list was complete (i.e. rivers, burns, lochs, pools, reservoirs, canals, coastal waters, underground water) the groups were told that this list represented the water environment. The reasons for defining the water environment in this way were two-fold: first, the public are very unlikely to use the term "water environment" in their everyday conversations so it was important to define it and second, it ensured that the participants were thinking of all types of water body for the remainder of the discussions and not just referring to those that were most salient to them (for example, lochs if they lived by a loch).

2.16 Overall, the opinion was that Scotland has good water quality and no problems with water quantity. Evidence that Scotland has good water *quality* centred around two themes. First, the quality of the water to drink in Scotland was thought to be superior to other countries, both in terms of taste and the safety of drinking water. People said that they drink bottled water when abroad but they drink from the tap in Scotland, some said they would be happy to drink from mountain streams in Scotland.

The water is better here than in other parts of Europe – if you are going abroad you have to drink bottled water.

(Aviemore, under 40, C2DE)

The water in the hills in Scotland is fine to drink from the streams. You don't need water purification tablets or anything like that.

(Glasgow, over 40, ABC1)

2.17 Second, some participants spoke of the good quality of lochs, rivers and the coast. The blue-flag status⁴ of many of Scotland's beaches, the "crystal clear" sea and clean rivers were all mentioned.

We have some of the cleanest rivers in Europe.

(Aviemore, over 40, ABC1)

2.18 Many of the discussions focused on improvements to the water environment that had been made over the past 10 or 20 years. Improvements as a result of the reduction of pollution, particularly from industry, better treatment of sewage and direct efforts to clean up local water bodies were mentioned. Evidence for these improvements was that salmon have been found in inner city rivers and dolphins have been seen at the Bass Rock. In many cases, the improvements appear to have added to the quality of life in the local area. Specific examples include improvements to the Caledonian Canal and the Forth and Clyde Canal that have made these pleasant areas in which to spend recreational time.

I think water pollution in the past was caused by the coal mines or the steel works and they've all gone...that's maybe a major factor in improving some of the rivers.

(Glasgow, over 40, ABC1)

It is a lot cleaner to what it used to be. It used to be the heavy industry, the boats came in...it used to be full of rubbish.

(Glasgow, under 40, C2DE)

2.19 The view that Scotland has a lot of water and is not likely to suffer from water shortages was widespread across all groups. Direct comparisons were made with the south east of England, where there are frequent, well publicised water shortages. However, one participant thought it was naïve to suppose there were no problems with water supply.

There's a presumption that we have so much water there's nothing to worry about; which is wrong really.

(Glasgow, over 40, ABC1)

2.20 Pollution was considered a negative aspect of Scotland's water by some. This was thought to be a particular problem in urban areas. While this view was raised in all groups, it was most prevalent in the Glasgow, C2DE, aged under 40 group. This group was the most negative about the water environment.

2.21 Finally, in contrast to the belief of the stakeholders, some members of the public did indeed have considerable knowledge about some specific aspects of the water environment. For example, one group discussed nitrate pollution, while another considered the use of water in hydroelectric power. Even those who did not have a great amount of technical knowledge were able and willing to discuss the water environment for an hour and a half. A positive implication of this relates to the public involvement necessary for implementation of the WFD. This will be discussed in more detail in chapter six.

⁴ A beach is awarded blue-flag status if it meets certain criteria relating to environmental education and information, water quality, environmental management and safety and services.

CHAPTER 3: CONCERNS AND THREATS

3.1 The purpose of this chapter is to look at what the main perceived concerns and threats are for the water environment among the stakeholders and the public.

Stakeholder views

3.2 Among the stakeholders, the biggest threat to Scotland's water environment was overwhelmingly thought to be pollution. This finding corresponds with the results of the international literature review (Dalrymple, 2006). Diffuse pollution, i.e. pollution from widespread activities with no one discrete source, was seen as the main polluter, both from farming and domestic waste.

Diffuse pollution is a huge threat to water quality environment. Things like development and modification is also an issue but it's not an issue that can't be addressed or controlled.

(Stakeholder 10)

The big problem now is diffuse pollution relating principally to agricultural run-off, fish-farming and acidification.

(Stakeholder 2)

I mean, for example, the pollution of phosphate, much of that is coming from domestic shampoos and soaps and detergents, which are very high contributors to phosphate in the environment.

(Stakeholder 5)

3.3 However, diffuse pollution was not thought to be a major problem by all and it was noted that Scotland compares favourably with other countries, e.g. Northern Ireland.

3.4 While point source pollution was thought to be problematic by some, others thought that was effectively dealt with through treatments. Point-source pollution being pollution that can be traced back to a single origin or source such as a sewage treatment plant discharge.

It's easy to control point source pollution because you can treat it at source. But diffuse agricultural run-off and urban pollution is more difficult to control.

(Stakeholder 3)

3.5 Abstraction, i.e. removing water from natural sources, was thought to be problematic because it can alter the flow of rivers and, in some cases, can dry up rivers. As well as disturbing the natural ecology, this can have an effect on recreational uses of water.

Abstraction can impact on the ability to use the river for hydrogeneration because basically it's taken some of the water out so there's lower flow... low flows in rivers which impact on recreation and things.

(Stakeholder 10)

3.6 Stakeholders thought that the public would be concerned about the most visible threats, such as point source pollution, rather than potentially more significant threats like diffuse pollution.

The things that will concern you are the things that are in your own backyard...it really depends on what they're exposed to in terms of level of concern of water environment.

(Stakeholder 3)

Point source pollution...is, in the eyes of the public, the most important thing, so that's the factory discharging into a river and dead fish and that sort of thing.

(Stakeholder 2)

Public views

3.7 The main concern of the public was that drinking water should be of consistently good quality. The main threat was thought to be pollution: for example, from over-development and a variety of specific local issues such as ship to ship oil transfers in the Firth of Forth.

3.8 All groups emphasised the importance of clean, safe drinking water. Therefore, a principal concern was the degree to which they felt the water supply was being tampered with, for example, by the addition of chlorine and fluoride. Although the chemical quality of the domestic water supply is covered by other legislation, not the WFD, it is important to note the likely dominance of this issue in any discussions about water. The quotes below give a flavour of these views.

Our water's straight from the hills and into the reservoir, it's the freshest water you can get. Then they're putting additives to it with chlorine and whatever and it's making it [water] worse than what it was before it went in.

(Scotlandwell, over 40, C2DE)

There was a big argument about fluoride and it being mass medication and against people's wills and I think that's gone away.

(Aviemore, over 40, ABC1)

3.9 The types of pollution that were thought to threaten the water environment were mainly small-scale pollutants such as rubbish and dog fouling by river sides. Sewage was also mentioned. Participants were most likely to mention concerns that were local to them. Unlike the stakeholders (and as predicted by the stakeholders), diffuse pollution was not identified as a major threat.

Human waste, isn't it...it all gets pumped into the Clyde and that.

(Glasgow, under 40, C2DE)

Rubbish dumped at the side of the roads...and that's polluting the water as well.

(Scotlandwell, over 40, C2DE)

3.10 A concern in several groups was the strain placed on the water environment by over-development. Two aspects were mentioned: the impact on the water supply and the increased amount of sewage and household wastage of water.

3.11 Other concerns were more group-specific. Thus the North Berwick groups were unique in mentioning the prospect of ship to ship oil transfers and the potential effect that could have on sea bird colonies. A concern for the older group in Glasgow was terrorism and whether water supply sources are being policed effectively to prevent tampering with reservoirs.

CHAPTER 4: VIEWS ON THE WATER FRAMEWORK DIRECTIVE

4.1 This chapter discusses views on the Water Framework Directive. While stakeholders already had considerable knowledge of the WFD, the general public were likely not to have heard of it. Thus they were read a short description before being asked their views.

Stakeholder views

4.2 Stakeholders were very positive about the extent to which the Scottish Executive and SEPA had communicated and consulted with them about the WFD and plans for implementation. The following views were typical:

...anybody that wanted to had an opportunity to comment on the process.
(Stakeholder 9)

We have been pretty closely involved. I think we have been kept pretty well informed.
(Stakeholder 7)

4.3 In terms of the implementation plans themselves, however, views were slightly more mixed. Most stakeholders were generally positive about the WFD. Specifically, they welcomed the holistic management of whole river basins and the fact broader environmental criteria than simply water quality would be taken into account. One stakeholder felt that problems would now be tackled before they reached ‘crisis’ point.

4.4 However, a small number of stakeholders raised concerns about whether the implementation would be proportionate to the problem. Their view was that, since most of Scotland’s water environment is very good, the planned WFD implementation is unnecessary and will be too bureaucratic and costly. The following quote sums up that perspective:

There hasn’t been an increase in problems of water or environment in Scotland that would justify the increasing of that size in an organisation looking after the environment. It’s really very frightening. And all the time it’s generating more and more regulation which is stifling in an industry, stifling innovation...And the UK does has a tendency to take legislation and make sure it complies with every last letter of it, whether or not it’s appropriate.
(Stakeholder 5)

4.5 Even a couple of stakeholders who were generally in favour of the WFD used phrases such as ‘gilding the lily’ and ‘using a sledgehammer to crack a nut’.

Public views

4.6 After having discussed perceptions of the water environment, uses, concerns and threats, focus group moderators gave participants the following brief description of the WFD and asked their reaction:

“The Water Framework Directive is a piece of European legislation designed to improve the quality of all the water environments across the European Union. There has been legislation to protect the water environment before – for example, laws about pollution, but the WFD is broader than that and aims to cover broader ecological issues – like the shape of water bodies, rate of flow and the impact on wildlife – and also take into account economic and social considerations. Some exceptions will be allowed but the aim is that all of the water environment will reach what’s called “good ecological status” by 2015. Scotland has implemented this European legislation in the 2003 the Water Environment and Water Services Act.”

4.7 The WFD was generally seen as being good in principle. Firstly, because the state of the water environment is important and, secondly, because it should help improve/maintain standards.

If it’s improving [the water environment], then it has to be good.

(Glasgow, over 40, ABC1)

If the standard was set, then if there was a deterioration it would have to change to come back to that level. So it would act as a policeman.

(Scotlandwell, over 40, C2DE)

4.8 However, a number of caveats and concerns were evident. The apparent vagueness of some concepts used in the WFD was noted:

I’d like to see what the definition is of “good ecological status”.

(Glasgow, over 40, ABC1)

...it’s jargon words.

(Scotlandwell, over 40, C2DE)

4.9 Some also felt that, although good in theory, effective implementation was what mattered.

The legislation would have to have some teeth to be able to do something.

(Scotlandwell, over 40, C2DE)

It’s just if it works. If it works.

(Aviemore, under 40, C2DE)

4.10 Concerns about the cost of implementation were also raised.

4.11 However, most comments related to the fact that it was a European Directive. The main concerns were about the level of local control and the following comments were typical:

... as long as the overall control, decision-making and all that about water in Scotland is made in Scotland and not in Brussels or wherever.

(Glasgow, under 40, C2DE)

There are so many countries now in the European Union, how on earth can they say one thing over the board, when there are all these local things that should be taken into account?

(Aviemore, over 40, ABC1)

What's the European Union got to do with Scottish Water?

(Scotlandwell, over 40, C2DE)

4.12 The importance of 'local knowledge' was also raised in relation to decision-making within Scotland – particularly by the Aviemore group who were concerned, not just about decisions being made in Brussels, but decisions being made in Edinburgh.

4.13 There was also scepticism about whether other countries would meet the same standards as Scotland and the rest of the UK.

How are they going to ensure that the countries follow this Directive?

(Aviemore, over 40, ABC1)

It's like you say, managing it and enforcing it...the countries that don't go by it, what happens to them?

(Scotlandwell, over 40, C2DE)

4.14 We sensed that these issues of local control and differing implementation in other countries would have been raised about any European Directive - regardless of the topic.

CHAPTER 5: PRIORITIES FOR THE WATER ENVIRONMENT

5.1 One of the key objectives for this research was to identify priorities for the WFD and the water environment. This chapter discusses the findings from this aspect of the research.

Stakeholder views

5.2 The main priorities for the stakeholders were related to what they felt were the main threats to the water environment: firstly, reducing diffuse pollution.

If you reduced the impact of diffuse pollution, you'd make an enormous improvement.

(Stakeholder 4)

Some of the big challenges are in this whole area of diffuse pollution, that is one of the priority areas now ...finding a way of reducing that that doesn't impose enormous costs and put land managers at a major competitive disadvantage.

(Stakeholder 7)

5.3 Additionally, mention was made by one stakeholder of restoring the water environment to how it was in the past, both in terms of restoring wetlands and marshes and undoing past modifications. However, the majority view was that this would be too difficult and not worth the effort or cost. Instead, focus should be on maintaining what we have.

There has to be good economic reasons for doing it [restoring water environment to how it was before modifications]...we live with what we've got...these are highly modified water courses which we can't do much about.

(Stakeholder 6)

Things that were built 50-60 years ago have had an impact, the environment has adapted to it, it's different to what it was but isn't necessarily bad. It's just different.

(Stakeholder 8)

5.4 In terms of specific areas that should be prioritised, the stakeholders felt that the worst areas, mainly urban areas and heavily farmed areas should be a priority.

I would probably have to say where the population is...there's an awful lot of river basins flow into urban areas so obviously that's natural wastage occurring which is a lot more difficult to control.

(Stakeholder 9)

Identify the areas where you know are at risk, concentrate on that...the priority areas are obviously where there is heavy industry.

(Stakeholder 6)

5.5 Stakeholders were also asked where they thought the main clashes of priorities would lie. A range of views were put forward:

I think the biggest challenge is going to be balancing the drive for environmental improvement against the actual cost of doing it, and whether the costs are the right costs, whether the objectives that have been set are the right objectives, and resisting the temptation to try and get everything sorted by 2015, not taking account of the fact that there are multiple cycles and it doesn't all have to be done and you can do it, you know, there's flexibility in the objectives as well, that you can set longer term or lesser objectives.

(Stakeholder 3)

I think it will lie between industry and agriculture. I think they're the two industries that will bear the most cost.

(Stakeholder 10)

It may be between development aspirations and measures which are being guided by the catchment plans which are against the development aspirations.

(Stakeholder 9)

5.6 No clear hierarchy of prioritising economic, social or environmental considerations emerged. Many said that they would find it impossible to simplify things down to the most important and least important.

Public views

5.7 A scenarios exercise was used in the focus groups to try to establish the public's priorities for the WFD. Five scenarios were created which highlighted various situations where there was a clash of priorities. These are briefly described below and the full versions are in Appendix two.

- The first scenario described a situation where 20 newly built houses were threatened by flooding. Residents were campaigning for flood defences to be put in place but this would alter the flow of the river and threaten a rare bird habitat.
- The second was about farmers polluting a nearby river. They were being asked to reduce use of fertilisers and stop their cattle going into the river. This would affect their profits.
- The third described a development of holiday chalets – although we also asked about affordable housing – that would mean a dam had to be put in the nearby river which would affect salmon stocks.
- Scenario four was about a hydroelectric power station that would damage a river and spoil the scenery.
- Finally, in the fifth scenario, a whisky distillery wanted to expand, this would create new jobs but damage the river and affect trout stocks – which would have an impact on the local trout fishing and related jobs.

5.8 Three scenarios were assigned to each group, ensuring that a range of different groups discussed each scenario. Given local concern of overdevelopment, this scenario was asked in

the Aviemore groups. Likewise, farm pollution is an issue in the area surrounding Scotlandwell so this scenario was asked of that group. However, if time allowed, more than three scenarios were used. The scenarios used in each group are shown in the table below.

Table 2: Scenarios used in each group

			1 Flood defences	2 Farm pollution	3 New development/supply	4 Green energy	5 Whisky abstraction
Age	Location	Social class					
Up to 40	Glasgow	C2DE	x	x	x	x	x
Over 40	Glasgow	ABC1	x			x	
Over 40	Nth Berwick	C2DE	x	x			x
Up to 40	Nth Berwick	ABC1		x	x	x	x
Up to 40	Aviemore	C2DE	x	x	x	x	x
Over 40	Aviemore	ABC1	x	x	x		
Over 40	Scotlandwell	C2DE		x	x	x	

5.9 These scenarios were followed by discussion of what should happen in each case and why. Initially, it was hoped that this exercise would lead to a clear hierarchy of priorities. However, while some priorities did emerge through the course of the discussion, they were not consistent. For example, some people always placed the environment first; while others prioritised employment, domestic water supply, the need for electricity, cheap food and the need for affordable housing over the environment.

At the end of the day saving the environment should always win.

(Aviemore, under 40, C2DE)

It's only 20 houses compared to a rare species of bird. You have to protect the birds and the plants and the animals.

(Aviemore, under 40, C2DE)

You'll not have any industry if you've got no power, no way of working or producing the power stations. So it's very much chicken and egg.

(Glasgow, under 40, C2DE)

It'll be a catch 22, because in the long run we want cheaper food, yeah we want them [farmers] to stop using pesticides but we go to the shops and buy the cheaper option.

(Glasgow, under 40, C2DE)

5.10 That said, people's decisions were very dependent on the specific circumstances of the situation or scenario they were being asked to engage in. For example, people were more

likely to support flood defences when a larger number of houses were going to be flooded, or if the houses had been there for many years and were not newly built. Likewise, damaging the environment for industry was more likely to be tolerated if jobs were created and there was a positive impact on the local economy.

If it's going to benefit thousands [of families] then it [flood defences] should go ahead. But if it's only benefiting three families or five families then it should be considered seriously.

(Glasgow, under 40, C2DE)

I think there's a better argument, what I would do is build flood defences for the houses that have been there for over fifty years and leave the other ones [those that were newly built].

(Glasgow, over 40, ABC1)

5.11 There was usually a considerable degree of questioning about the assumptions and impact of the scenarios. For example, people questioned the amount of jobs that would be created and lost in the fifth scenario – indicating that they wanted to be sure of the situation before making a decision. In scenario 1, it was felt that the impact would not be as great as described because “*birds aren't stupid*” and would find somewhere else to live. The impact of scenario 2 was also questioned: even if cattle stop drinking from river, someone suggested that wild animals will still be doing so further upstream leading to the same effect overall.

5.12 Instead of ranking of social, economic and environmental considerations, participants preferred to look for alternative outcomes for each of the scenarios. For example:

Provide them with alternatives to pesticides. (Scenario 2)

(North Berwick, under 40, ABC1)

We should think of re-housing them all...we don't just abandon them and say well tough luck. (Scenario 1)

(Aviemore, over 40, ABC1)

5.13 There was also an emphasis placed on compromising and mitigating the effects. For example:

There must be some way you could divert the water so that it was still away from the houses and is still not affecting the birds. (Scenario 1)

(Aviemore, under 40, C2DE)

They're wanting farmers to do these things but they're not willing to back them financially. If they would offer them a financial incentive for the money they were going to lose that would be fair enough. (Scenario 2)

(Aviemore, under 40, C2DE)

I cannot believe that that couldn't be worked out and there couldn't be a compromise to provide more water. (Scenario 5)

(Glasgow, over 40, ABC1)

What's wrong with windfarms...that would do the same thing without spoiling [the river]. (Scenario 4)

(Aviemore, under 40, C2DE)

5.14 These stages of decision-making – questioning, exploring options, seeking compromise and mitigating effects – can be likened to the way in which informed advisory groups currently decide upon priorities. The public appear to have taken their decision-making seriously and carefully weighed up and questioned the different options. This suggests that a similar degree of conscientiousness and interest might be displayed by the public if asked to be involved in the WFD implementation.

5.15 As well as this scenarios exercise, participants were also asked specifically to identify their priorities for the water environment. Again, this did not result in a hierarchy of priorities. However, two main themes emerged: prioritise drinking water supply and make efforts to bring the worst areas up to standard.

It would be difficult not to put the contingency of the water supply right at the top of the list...since we can't live without it.

(North Berwick, over 40, C2DE)

I think the urban areas personally [should be improved]. I know there's not as much industry from pollution but they're far higher populated.

(Glasgow, under 40, C2DE)

CHAPTER 6: PUBLIC INVOLVEMENT

6.1 This chapter covers views on public involvement; whether the public should be involved, how they should be involved and potential barriers to involvement. It is based on findings from the interviews and focus groups as well as our reflections on the research process.

Stakeholder views

6.2 Stakeholders anticipated a number of potential problems in engaging the public on WFD implementation. These are grouped under the following headings: lack of interest, lack of specifics, engagement at local level, terminology and lack of knowledge and ensuring representative involvement.

Lack of interest

6.3 Stakeholders were unsurprised by the key attitude survey findings: that most people think that Scotland's water is generally of good quality and is likely to stay that way, and they are less concerned about issues relating to the water environment than other environmental issues. So while there was a consensus among stakeholders that public involvement in implementation of the WFD was desirable, there was scepticism about the extent of public interest, and consequently the amount of public involvement that might be generated.

Why should they be concerned? It's not costing them any money directly, it's not affecting them directly, they go to the bathroom and there's a WC there and a wash hand basin and, indeed, in the gents loo there's a urinal which is clean and fresh and it's flushed with water.

(Stakeholder 5)

I think the general public's interest in this is going to be vanishingly small... if they're not that worried they're not going to be that interested.

(Stakeholder 2)

It's going to be very difficult to make the Water Framework Directive and River Basin Planning sexy enough for people to say oh yeah, I'm going to along to that public meeting, or I'm going to read that document.

(Stakeholder 3)

Lack of specifics

6.4 Several stakeholders felt that the lack of specific plans, at least at this stage of implementation, was a problem:

The problem that I would see for anybody who'd had that task [of engaging the public] is that it only becomes real when it's about specific things, and the Directive itself isn't about specific things... it's still at the airy-fairy stage.

(Stakeholder 5)

6.5 Echoing this point, another stakeholder thought there had perhaps been too wide a consultation, too early, and this may have turned people off because there was nothing tangible to comment on.

They're going to end up being death by a 1000 consultations, and I think it's the balance of getting wider stakeholder involvement but getting a wider stakeholder involvement at the right level [...] the thing that you probably want the man in the street to comment on is later on in the process when you get to programmes of measures.

(Stakeholder 3)

6.6 In contrast, however, one stakeholder thought the public *should* be involved earlier, when key decisions were being taken.

Engagement at local level

6.7 In addition to engagement on specifics, the point was also made that engagement should be at a local level – and at a meaningful local level. One stakeholder suggested that area advisory groups are too big. Citing the West Highland area advisory group, he commented:

If you're talking about something that's happened away over near Inverness somewhere, then people in Harris are going to go 'who cares?', it's not really of interest.

(Stakeholder 3)

Terminology and lack of knowledge

6.8 Several stakeholders felt that the terminology used and a perceived lack of knowledge on the part of the public could be barriers to involvement. A couple mentioned that the phrase 'European Directive' might be off-putting and so the message needed to be more about what it was trying to achieve – integrated management of the water environment, although not necessarily expressed in those terms – rather than where it had come from. Others noted that terms such as 'abstraction' and 'impoundment' should be avoided (or at least explained):

...it's so esoteric. I mean basically – it's presented in such a jargon driven way. What does impoundment mean? And even the bloody words push you back. I mean basically at the end of the day it's using water.

(Stakeholder 6)

Ensuring representative involvement

6.9 All these potential barriers led to a concern among stakeholders that only an unrepresentative sub-section of the public would be willing to get involved. One warned of 'professional forum attenders' and another was concerned that:

It is very difficult to get them [the general public] to contribute, the problem being if they don't, the people who do come are people with an agenda and

they're the voices that are heard rather than the balanced voice, the balanced view.

(Stakeholder 8)

Public views

6.10 Most of the above points were borne out by the focus group work – both in terms of what people *said* in the discussions and our experience of the *process* of trying to engage people on the issues.

Lack of interest

6.11 Where there is perhaps a more positive message than the stakeholders views might suggest, is the potential public interest given the level of engagement exhibited by the research participants in the issues they were presented with. As noted throughout this report and prominent in the findings of both the earlier survey and literature review, there is a general perception that Scotland's water is of good quality and is likely to stay that way, which might raise concerns about a certain degree of public complacency or lack of concern. Nevertheless, focus group participants were engaged, interested and happy to discuss the issues for at least an hour and a half. In most cases, we had to cut the discussions short because we ran out of time. This suggests that it *is* possible to generate public involvement despite other demands on people's time. Although we only undertook one method of public consultation, and did not attempt a study of different approaches, our experience suggests that the following worked.

- Tapping into a general interest and concern about the broader environment by inviting people to a 'discussion about aspects of the Scottish environment and Scottish landscape', rather than specifically mentioning the 'water environment' at the outset.
- Recognising the other demands on people's time and potential expenses involved by giving people £25 expenses to incentivise their attendance. While this will not be appropriate or feasible for all forms of public involvement, it is a potentially important factor in ensuring representation from the broader community rather than just particular interest groups.
- Engaging people in discussion about specifics and about local issues (this is discussed further below).
- Avoiding the use of technical terms (such as 'abstraction' and 'impoundment') as much as possible or, where unavoidable, explaining terms and concepts (such as 'the water environment').

Lack of specifics

6.12 Stakeholders were concerned about the difficulty of involving the public where there is a lack of specific, concrete plans and we found that the focus group discussions worked much better when the scenarios were discussed. It was at that point that most people became interested, voiced strong opinions, argued and became truly engaged. The stages of decision-making – questioning, exploring options, seeking compromise and mitigating effects – which the public employed when discussing specifics of scenarios is similar to the way in which

informed advisory groups currently decide upon priorities. This shows the importance of providing concrete details for the public to work with.

6.13 In contrast, when we asked for reactions to the WFD (after being given a brief description), the dominant theme was that it was fine in theory, but what mattered was how it was implemented in practice. Similarly, discussions around general priorities for improvement did not work particularly well (either with the stakeholders or the public) and tended to result in people suggesting that it all depended on what problems were identified.

Engagement at local level

6.14 The recommendation by stakeholders that engagement should be at local level was echoed in comments by focus group participants. The key issues here appeared to be relevance and being able to see the actual impact of involvement.

One of the main incentives for taking part would be if people could see change happening in their community - if they felt they were making a difference.

(Glasgow, over 40, ABC1)

An example of where the public have successfully petitioned against the use of a rugby pitch for a supermarket - if it is relevant to them, they will be interested.

(North Berwick, over 40, C2DE)

Terminology and lack of knowledge

6.15 As noted above, we avoided the use of technical terms and concepts as much as possible and, where we needed to use them, we tried to explain them as much as possible. This appeared to work well and no confusion about terminology was evident in the discussions.

6.16 Although participants had already demonstrated their ability to discuss the issues – and in some cases demonstrated quite extensive knowledge about some aspects of their local water environment – when asked about barriers to involvement, some did think that lack of knowledge would be a problem.

...people would like to be involved but they don't think they know enough about it to be involved.

(Aviemore, under 40, C2DE)

CHAPTER 7: SUMMARY AND IMPLICATIONS FOR IMPLEMENTATION

7.1 The overarching aim of the research was to inform implementation of the WFD by exploring:

- the meanings people attach to the water environment;
- the values attached to its different attributes;
- the public's priorities for service provision, and the factors that affect these priorities;
- methods of how people have been, and should be, consulted in the implementation process.

7.2 The aim of this chapter is to summarise the main findings and draw out the implications for implementation. An overall conclusion is presented at the end of this chapter.

Current perceptions of the water environment

7.3 In general, Scotland's water environment is perceived as very good. On one hand, this creates a potential difficulty in that people may not appreciate the need for the WFD and the costs and other impacts associated with implementation. On the other hand, there is the potential to build on the importance and pride felt about the quality of Scotland's water. Evidence from the focus groups suggests that the public may well be receptive to messages about *maintaining* our high standards and *protecting* one of Scotland's key assets.

7.4 In discussions about the water environment, members of the public tend to focus on drinking water rather than the broader water environment. This suggests there is a need to educate the public on what constitutes the broader water environment and what, in addition to pollution, can damage it. One possibility would be to have awareness raising campaigns that tapped into the interest and concern about the environment in general which was apparent in the focus groups.

Priorities for improvement

7.5 It was clear from the research that it would not be possible to construct a meaningful hierarchy of the public's priorities for improvement or for resolving conflicts (for example, environmental considerations ahead of economic ahead of social) as views were very dependent on the specific circumstances. The only clear priorities to emerge were safeguarding the drinking water supply and focussing on improving the worst areas rather than attempting to make already 'good' areas even better.

7.6 Although no simple criteria emerged for prioritising improvements or resolving conflicts, what did emerge were priorities for the decision-making *process*. These were:

- questioning the assumptions and impacts of the situation under consideration. This suggests that the public will want detailed, credible evidence to inform their involvement.
- exploring a wide range of alternative options.

- where a conflict of interests seems unavoidable, seeking compromise between the affected parties.
- in many cases, mitigating the effects on parties disadvantaged by the decision (for example, compensation for farmers).

Engaging the public

7.7 The focus groups proved that members of the public *can* be engaged in discussions about managing the water environment. Evidence from the process of conducting the focus groups and the discussions themselves suggests that the following issues should be considered:

- engaging people by tapping into the existing interest and concern about the environment in general – rather than specifically mentioning the ‘water environment’ at the outset.
- avoiding the use of technical terms (such as ‘abstraction’ and ‘impoundment’) as much as possible or, where unavoidable, explaining terms and concepts.
- focussing on the ultimate aim of improving the environment, rather than the European legislation angle.
- where appropriate, recognising the other demands on people’s time and potential expenses involved by giving people monetary incentives to attend focus groups or participatory events. While this will not be appropriate or feasible for all forms of public involvement, it is a potentially important factor in ensuring representation from the broader community rather than just particular interest groups.
- involving people at an appropriate stage - when there are specific, tangible issues to be discussed rather than more abstract principles.

7.8 Finally, and perhaps most importantly:

- engaging people at a *local* level so that they have an interest in, and an understanding of, the issues and they can see the actual impact of any improvements.

7.9 While the most effective engagement will be at a local level, there may be a role for some national initiatives. This mirrors the findings of the literature review (Dalrymple 2006). For example, the implementation of an education campaign to raise awareness of the threats to the water environment and what steps the public can take to help (such as conserving water or using ecologically friendly products – or whatever might be deemed priorities for improvement) could be considered. As discussed above, these messages should focus on maintaining and protecting one of Scotland’s key assets and tap into existing concerns about the environment in general. It may also make sense to support local activities with nationally co-ordinated guidance (for example, tool-kits or examples of best practice) on how best to engage members of the community.

Conclusion

7.10 Overall, this research indicates that both the public and the stakeholders consider Scotland to have good water quality and water quality. That said, both groups identified current and potential threats to Scotland's water environment and their priorities for the future were mostly based on these concerns.

7.11 The findings from the focus groups are interesting when considering *how* to engage members of the general public in WFD consultation. The most important point to note here is that during the discussions the focus group participants were clearly engaged, interested and happy to discuss the issues for at least an hour and a half. This suggests that it *is* possible to generate public involvement.

7.12 However, as discussed throughout, there are caveats that must be borne in mind if public engagement in the WFD is to be successful and take account of local social and economic issues. In particular, meaningful engagement would be at a local level, at an appropriate stage, i.e. when there are specific tangible issues to be discussed rather than more abstract principles, and should preferably be representative of the whole community.

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APPENDIX 1: TOPIC GUIDE FOR STAKEHOLDER INTERVIEWS

INTRODUCTION (5 mins)

- Thank you very much for agreeing to be interviewed
- Introduce self & Ipsos MORI
- We are conducting the research for the Environment and Rural Affairs Department of the Scottish Executive, to explore the opinions and priorities of the Scottish public and key stakeholders in relation to the implementation of the Water Framework Directive
- Purpose of interview/objectives:
 - We know your organisation has already been involved in discussions about the implementation and we don't want repeat that. [**acknowledge if they are NSF member**]
 - Primarily to capture your views as an informed member of the public, rather than a representative of your organisation.
 - Capture your views on the big picture about priorities for improving, or maintaining standards in, the water environment?
- We won't name you or your organisation but can't promise confidentiality as small number of key stakeholders and someone might be able to identify you. But if you don't want quoted on a particular point or want to retract anything you wish you'd rather not have said, that's fine.
- Length (45-60 minutes)
- Permission to record
- Any questions before we start?

WARM-UP AND ROLE (5 mins)

- What is **your role** in your company/organisation?
- How much do you **know about the Water Framework Directive?** How well do you think it has been communicated? What do you think is not clear?
- How **have you been involved** in the various activities relating to the WFD and associated legislation? Your organisation? You, personally?

STRESS, NOW GOING TO ASK YOU TO RESPOND SIMPLY AS AN INFORMED MEMBER OF THE PUBLIC, RATHER THAN AS A REPRESENTATIVE OF YOUR ORGANISATION.

REACTIONS TO THE PUBLIC'S VIEWS (5 mins)

Here are some findings from a recent survey we did for the Scottish Executive (hand participant sheet with a few key findings on the issues relating to the future e.g. priorities; risks; will it be better or worse; likelihood of water shortages etc).

- Which of these results do you find **most surprising?** Why?

- And which did you find **least surprising**? Why?

Overall would you say that the general public's level of awareness and concern with the quality of the water environment is low low or about right? Why?

IF TOO LOW, What would be the ideal level of awareness? What do you think are the priorities for action in terms of informing the public about the various issues? PROBE: What issues? What type of actions?

And in particular, would you say that the general public's level of awareness and concern with issues related to water supply is too low or about right? Why?

IF TOO LOW, What would be the ideal level of awareness? What do you think are the priorities for action in terms of informing the public about the various issues? PROBE: What issues? What type of actions?

RESEARCH WITH THE PUBLIC (5 MINS)

We are about to conduct further research into the public's attitudes towards the water environment. This research will be in the form of focus groups so will allow for more in-depth information to be gathered.

Is there anything that you think would be particularly **important to ask** the public?

What do you think **their priorities** for the future will be?

In general, how should the **general public contribute to future planning** relating to the implementation of the Water Framework Directive?

What are the **main barriers** to this involvement? How could these be **overcome**?

BIG PICTURE (15 mins)

What's your view of the **current state of the water environment** in Scotland? PROBE: what's good? What's bad? How does it compare with the water environment in other parts of Europe?

What do you think are the **biggest threats** to the water environment in Scotland?

What improvements would you like to see made before 2015?

Ideally, what position would you like Scotland's water environment to be in by **2015**? And what position do you think it actually will be in? Why?

PRIORITIES (20 mins)

Should we try and raise the quality of the water environment across the board or focus on specific areas? Why? What specific areas?

- PROBE specific geographical areas. (e.g. Loch Lomond, Solway Firth) Which ones? Why?
- PROBE particular types of geographical area (e.g. urban/rural, Central Belt/Highland) Which ones? Why?

- PROBE specific types of water body (e.g. coastal water, lochs, large rivers, wetlands, canals). Which ones? Why?
- PROBE in relation to specific activities (e.g. abstraction, damming, pollution, sewage). Which ones? Why? PROBE ON EACH SPECIFIC ACTIVITY
- PROBE in relation to particular threats (ensuring adequate supply, flood defences, water quality and domestic supply, water quality and impact on wildlife/fishing)
- PROBE pros/cons of numerous small improvements or few large-scale improvements.

What's less of a priority? Why?

Where do you think the biggest **conflicts/clash of priorities** will lie? PROBE: environmental, social, economic?

How should these conflicts be **resolved**? PROBE:

- in terms of how they are resolved (e.g. who should be involved?)
- in terms of what should be taken into account?

How should the **needs of different users** be prioritised PROBE: human v wildlife? Agriculture v industry v energy v domestic supply v leisure v tourism.

ANYTHING ELSE? (5 MINS)

Is there anything we have not covered which you think is important?

Do you have anything else at all you would like to add?

Explain next steps

THANK AND CLOSE

APPENDIX 2: TOPIC GUIDE FOR THE GENERAL PUBLIC FOCUS GROUPS

INTRODUCTION/WARM UP – 10 MINS

Introduce self and Ipsos MORI

Explain purpose of the research:

- Ipsos MORI has been commissioned by the Scottish Executive to conduct a programme of research among the general public looking at aspects of the Scottish environment and the Scottish Landscape. (If ask, say that we'll explain more later on but don't want to pre-judge what issues you think are important)
- We are not expecting people to have given a lot of thought to the subject or to be knowledgeable. We will be talking to a range of people in different locations across Scotland.
- Ipsos MORI's independence and guarantee of confidentiality.

Explain group should last around 1hr 30 minutes. Check everyone is ok with this. Tell participants where the nearest fire exits, toilets are etc.

Request permission to record (can be turned off at any point).

Warm up exercise/Participant introductions (Ask them to speak to neighbour, ask them what they would and wouldn't miss about the Scottish landscape if they went to live abroad, then introduce them)

ENVIRONMENT IN GENERAL – 10 MINS

Word association: What words come to mind when you think of "the Scottish landscape".

PROBE: different parts of Scotland?

 this area?

 urban/rural areas?

 different features?

 how would you describe it to someone from China who had never been here?

Is there anything particularly distinctive about it?

There's a lot of talk these days about environmental or 'green' issues. Thinking about Scotland's environment. How good a state do you think it is in?

PROBE: How does it compare to other parts of the UK?

Other parts of the world?

What's good about it?

What's bad about it?

What are the biggest threats to it?

(What do you think we should be doing about it?)

(What action should individual members of the public like ourselves be taking?)

WATER ENVIRONMENT – 10 MINS

Thinking back to school, can you remember what the "water cycle" is? SHOW DIAGRAM A.

I'd like to talk now about Scotland's water in particular. What are all the different bodies of water in Scotland? For example, rivers... what else? USE FLIP CHART TO LIST DIFFERENT BODIES AND CHECK GOT: rivers, burns, lochs, pools, reservoirs, canals, coastal waters, underground water. I'll use the term "water environment" to cover all these different bodies. WRITE "WATER ENVIRONMENT" at top of list.

Thinking about Scotland's water environment. How healthy do you think it is?

PROBE: Different bodies of water?

Different parts of Scotland?

This area?

Urban/rural areas?

How does it compare to other parts of the UK?

Other parts of Europe?

What is a "good" water environment?

What are the biggest threats to it?

What are the biggest threats to the water environment in this area?

What do you think we should be doing about it?

What action should individual members of the public like ourselves be taking?

USES AND PRESSURES – 10 MINS

Can we compile a list of different uses of the water environment? (FLIP CHART)
PROMPT: in this area?

What do you use it for? How often?

industry, agriculture, fishing, water supply, leisure, wildlife.

USE DIAGRAM B AS A PROMPT IF NESS.

How do different uses affect the water environment?

What else do we do that affects it?

Which things are the most damaging?

Which do no damage or very little damage?

EXPLAIN: Some things which most of us don't think of harming the water environment actually can do some damage – for example, simply taking water out or putting it back in can alter the flow in a river, or the water levels in a loch and affect plants and animals. Putting it back at a different temperature can also affect them. Strengthening or straightening river banks, or putting in dams or flood defences can change the flow or course of a river and upset the ecological balance, and increase flood risk and increase erosion. However, there might be good reasons for doing these things and we might decide that the benefits outweigh the potential damage.

WATER FRAMEWORK DIRECTIVE – 10 MINS

Have you heard any information about changes to the way the water environment in Scotland is managed?

Have you ever heard of the Water Framework Directive?

EXPLAIN (AND GIVE OUT SUMMARY):

the Water Framework Directive is a piece of European legislation designed to improve the quality of all the water environments across the European Union.

There has been legislation to protect the water environment before – for example, laws about pollution, but the WFD is broader than that and aims to cover broader ecological issues – like the shape of water bodies, rate of flow and the impact on wildlife – and also take into account economic and social considerations.

Some exceptions will be allowed but the aim is that all of the water environment will reach what's called “good ecological status” by 2015.

Scotland has implemented this European legislation in the 2003 the Water Environment and Water Services Act – you don't need to remember that!

What's your reaction to all this?

PROBE: is it a good thing or bad thing?

Is it important?

What concerns do you have about it?

SCENARIOS - 25 MINS

I'd now like to talk about some of the sorts of scenarios that might come up and decisions about priorities that we might have to make about the water environment.

Scenarios....(probably time for 3 out of the 5 scenarios in each group) – 8 mins each

SCENARIO 1 (aiming to explore: flood prevention v habitat/ new houses built in risky areas v existing houses threatened because of changes in flow/ large number v small number of houses affected).

The River Eden is a small river which flows from the Benmore hills to the sea. In recent years, because of wetter weather in the winter, it has almost burst its banks. Twenty new houses in the area of Newton are threatened by flooding. The villages want flood defences put in to safeguard their homes. However, environmentalists say that the flood defences will threaten important wetland habitats a couple of miles upstream from Newton and endanger a rare species of bird as well as other plants and animals.

What do you think should happen?

PROBE: what should be taken into account?
Who should decide?

What if the houses in Newton had not yet been built, but had only recently received planning permission?

Slightly further downstream, twenty houses in the area of Auldton are now threatened by flooding. Most of these houses have been there for over fifty years and have never been flooded before. These people join the Newton residents in their campaign for flood defences.

Does this make a difference?

What if only three houses in total were threatened?

SCENARIO 2 (aiming to explore: 'good' status v 'very good' status/ agriculture v habitat/ larger more profitable enterprises v smaller less profitable enterprises)

Scientists have undertaken an assessment of the River Floom. They have concluded that it is ecologically pretty healthy. The main problem they have identified is pollution from the surrounding farmland. There are 8 small farms and 2 large farms in the area. They want the farmers to take various measures to minimise the pollution from fertilisers, pesticides and animal waste. The measures include fencing off the river banks so cattle can't trample the river banks and defecate in the water, a reduction in the number of cattle, a reduction in the use of fertilisers and pesticides, and creating buffer strips of a several metres between the river and the cultivated land. The farmers argue that they are struggling financially as it is and they cannot afford the reduction in profit that these measures will involve.

What do you think should happen?

Should the size of the farm matter?

Do the farmers' profits make a difference?

The farmers also argue that the river is pretty healthy. Although pollution from farmland might be the *biggest* problem – it's not actually that big a problem. They say that striving to make the river extremely healthy (e.g. 10 out of 10 rather than 8 out of 10) is not necessary. What do you think?

SCENARIO 3 (aiming to explore: economy v leisure interests/ economy v habitat/ tourism v 'necessary' housing/ general public saving water v increasing supply)

A firm wants permission to build a development of 250 holiday chalets. They say the development will bring a much needed boost to the local economy. However, the local water supply is already under strain and if the development goes ahead it will require a local loch to be dammed to create a sufficient supply of water all year round. The damming will affect the flow rate of the river which flows out of the loch and will mean that salmon will no longer be able to use the river as a spawning ground. Local environmentalists and salmon fishers think the development should not go ahead.

What do you think should happen?

What if the development was for affordable housing for local people rather than holiday chalets?

Environmentalists say that there would be no need to for an additional water supply if everyone in the area was much more conscious about saving water. They suggest that existing houses and the new chalets should have water meters fitted and everyone should cut their consumption by a third. What do you think of that suggestion?

SCENARIO 4 (aiming to explore: water environment v broader environmental issues/ energy v habitat/ energy v landscape/ energy v leisure/ economy v landscape/ economy v habitat/ economy v leisure)

To help meet targets for renewable energy production, there are plans to build an innovative new form of hydro-electric power station on the River Spate. This will provide sufficient power for the nearby town of 10,000 people. However, environmentalists object that the

engineering works and the changes in flow will damage the habitat and affect fish stocks. Other people object because they say the power station will spoil a renowned beauty spot.

What do you think should happen?

The river is very popular with kayakers and they say the changes to the flow will severely limit the times they can use it. Does this make a difference?

The power station will employ 100 local people – many of whom have just been made redundant from a local factory. Does this make a difference?

SCENARIO 5 (aiming to explore: abstraction for industry v environmental concerns v economic development)

Badachlie is a small but successful whisky distillery. It would like to substantially increase production to meet the demand for its whisky. This would create around 20 new jobs. However, the local landowner objects that the additional water needed by the distillery from the River Achlie up-stream of his land, would damage the habitat and affect trout stocks. His livelihood and five of his staff depend on organising trout fishing holidays for tourists. Environmental groups also object that this will damage the habitat.

What do you think should happen?

An independent assessment of the impact of the distillery is undertaken. It concludes that there is enough water in the river for the majority of each year. For there to be no affect on the habitat and fish stocks, but recommends in times of low water, that the distillery should not be allowed to draw extra water. Does this make a difference?

PRIORITIES – 10 MINS

How would you prioritise the different uses of the water environment (go back to flip chart or write new list: agriculture, industry, leisure, domestic water supply, wildlife/habitat, energy, tourism). Top priority? Least important?

Should we try and raise the quality of the water environment across the board or focus on specific areas? Why? What specific areas?

PROBE ON SOME OF THESE IF TIME:

- PROBE specific geographical areas. (e.g. Loch Lomond, Solway Firth) Which ones? Why?
- PROBE particular types of geographical area (e.g. urban/rural, Central Belt/Highland) Which ones? Why?
- PROBE specific types of water body (e.g. coastal water, lochs, large rivers, wetlands, canals). Which ones? Why?

- (PROBE in relation to specific activities (e.g. abstraction, damming, pollution, sewage). Which ones? Why? PROBE ON EACH SPECIFIC ACTIVITY)
- (PROBE in relation to particular threats (ensuring adequate supply, flood defences, water quality and domestic supply, water quality and impact on wildlife/fishing))
- PROBE pros/cons of numerous small improvements or few large-scale improvements.

Do you think we should aim to restore some of the water environment to how it was in the past?

Where do you think the biggest **conflicts/clash of priorities** will lie?

What should be taken into account when resolving these conflicts?

Which uses should be prioritised?

(Ideally, what position would you like Scotland's water environment to be in by **2015**?)

(And what position do you think it actually will be in? Why?)

How important an issue is this?

PUBLIC INVOLVEMENT – 5 MINS

EXPLAIN: One of the features of the new legislation is that there should be public involvement in decisions about what should be done to improve the water environment and what the priorities for improvement should be.

Do you think the public would be interested in being involved in decisions about the water environment?

What's the best way for the public to be involved?

Would you, personally, want to be involved?

What kinds of things do you think would prevent/discourage people like yourselves getting involved?

What might encourage you to get involved?

Finally – anything else you would like to say?

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