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Evaluating Participation in WFD River Basin Management in England and Wales: processes, communities, outputs and outcomes

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Abstract

Participatory environmental governance is increasing worldwide. One area where such governance forms are apparent is in the management of water resources. For example, in the European Union the Water Framework Directive mandates several forms of involvement via its legal obligations. Under the Directive, implementing agencies should provide information on river basin management planning to the public, consult citizens and stakeholders during planning and actively involve interested parties in the plan process. Yet questions arise over the success of participatory processes on the ground in EU member states. In this study, participation was therefore evaluated in WFD river basin planning in England and Wales using process, community, output and outcome-related indicators. Research was conducted through extensive quantitative and qualitative data collection over a long temporal scale within case analyses of the Anglian, Humber and South West river basin districts. Results suggest that while the first phase of river basin management largely met legal requirements, the actual success of participatory water governance was mixed. On this basis, recommendations are made for enhancing participation in future river basin planning through national and EU policy.

Key words: participation, active involvement, Water Framework Directive; river basin management, learning.

Introduction

Participation is *de rigeur* in environmental management worldwide. Although definitions vary, participatory governance in this context denotes the involvement of state and non-state actors in policy making whereby those actors were not routinely engaged in such decisions in the past (Renn 2008: 331ff).

Multiple studies now exist on practice globally, including *inter alia* the United States (Wondolleck and Yaffee 2000), Canada (Frame et al. 2004), Australia (Margerum 2011) as well as various European (Aldred and Jacobs 2000, Dedeurwaerdere 2009, Wesselink et al. 2011) and developing countries (Robinson and Berkes 2011). Research has been extended to participation in different policy sub-sectors, including forestry (Carr et al. 1998); rural development (Riley 2002) and protected areas (Gray 2004). Yet participation is most highly

visible in water politics (for example, Warner 2007; Margerum 2011). In the European Union (EU), participatory water management is heavily promoted by the Water Framework Directive (WFD).

Undoubtedly, the Directive is fundamentally reshaping multi-level environmental governance structures in many EU member states. Introduced as a response to the perceived failure of issue-specific EU water initiatives and political demands for more integrated policy responses (Benson and Jordan 2008), this legal mechanism is characterised by several innovative features designed to enhance the ecological status of water resources. Most notably, the WFD includes requirements for both river basin management planning and stakeholder involvement in water planning. Public participation requirements under Article 14 WFD legally mandate that different stakeholders, including the public, should participate in the process of drafting management plans. In this respect, while the Directive has helped embed participatory practices, critical questions arise over the implementation and achievements of participatory water planning on the ground.

Soon after the adoption of the Directive, an emerging literature analysed the challenges that were posed by the WFD to existing water management practices. Mainly theoreticalconceptual, these works generally focused on the suitability and ambitions of various types of public involvement (Kenyon 2005, Ker Rault and Jeffrey 2008), the WFD's compatibility with leading water management discourses (Rahaman et al. 2004), questions of interplay and fit (Moss 2004) or uncertainty in WFD implementation (Newig et al. 2005). Much more empirical in nature, a second wave of scholarship studied public participation in various WFD pilot projects. This includes work by Tippett et al. (2005), Carter and Howe (2006), Blackstock and Carter (2007), and Kastens and Newig (2007). More recently, authors have studied the actual politics of WFD implementation but often with a focus on specific areas of water management, for instance on costs (Roggero 2013), the interaction with policy areas such as forestry (Keskitalo and Pettersson 2012) or biodiversity (Beunen et al. 2009), river basin management plans (without discussion of public and stakeholder participation), or specific actor groups (Andersson et al 2012). Only a few studies take a broader perspective and analyse public participation in WFD river basin planning as it emerges in the member states more than ten years after the adoption of the Directive. Previous scholarship has studied practice in Spain (Pares 2011), the Czech Republic (Slavíková and Jílková 2011),

France, Denmark and the Netherlands (Liefferink et al. 2011), Germany (Moss 2012), and the Netherlands (van der Heijden and ten Heuvelhof 2012).

This article aims to contribute to this literature through an in-depth case study of WFD implementation in the United Kingdom (UK). Water management in the UK has been historically characterised by a top-down, technocratic and exclusionary approach to participation that primarily involved agencies and water companies (Fritsch and Benson 2013). As we demonstrate below, this agency-led approach has been modified under the implementation of the Directive through the creation of new, multi-actor institutions and participatory processes at the regional scale. But while previous scholarship has assessed how its legal requirements for public participation have been met (Ker Rault and Jeffrey 2008; Woods 2008), studies which analyse the practice of participatory WFD water planning in the UK are still in great demand. In this study, we analyse participation in UK water management with a focus on participatory processes and institutions, civic community attributes, planning outputs and outcomes.

The article is organised as follows. First, we briefly extract the meaning of and requirements for participation in the WFD. Second, we then review different theoretical approaches to evaluate participation and discuss a conceptual framework based on indicators of process, community attributes, policy outputs, and outcomes. We describe, third, data collection and analysis methods and the data used to evaluate these indicators of participation. Due to the separate implementation approaches taken in UK countries, we focus our attention on practice in England and Wales. This evidence is employed, fourth, to examine participation over a long temporal scale in the first river basin management planning phase, between 2006 and 2011⁵, in three case studies: the Anglian, Humber and South West River Basin Districts (RBDs). The final section is dedicated to our conclusions.

Participation in the Water Framework Directive

The WFD's provisions on public participation have been a recurrent theme in policy and academia. Below we summarise their most important features as a necessary step towards

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Planning occurred between 2006 and 2009, and a subsequent stakeholder process continued until 2011 when an implementation phase was introduced. Our research only covers this first phase between 2006 and 2011, and disregards post-2011 developments.

operationalisation. To this end, we distinguish three levels of public participation mentioned in the Directive and the implementation guidelines: access to information, public comments, and active involvement. These categories resemble three ideal types of the communicative relationship between public authorities and non-state actors: public information, public consultation, and public participation (Rowe and Frewer 2005). While public information represents a setting in which the competent authority mainly conveys information to non-state actors, public consultation is characterised by communication flows from non-state actors to public authorities. Public participation, finally, describes an interactive and discursive process between public agencies and non-state actors (Wright and Fritsch 2011).

First, apart from information directly relevant for public comment, Article 14(1) WFD requires that water authorities make important background information publicly available. The Directive does not require authorities to inform the public actively about background documents and to provide additional information. Rather, public authorities shall provide access to this information when requested to do so (European Commission 2003: 45) although farther-reaching pro-active arrangements are suggested for consideration.

Second, with regards to public consultation, member states are obliged to organise three public comment procedures during the preparation of the river basin management plans (RBMP) (Art. 14(1) WFD). The 'public, including users' (ibid.) might submit viewpoints on agency proposals electronically or on paper whereas public hearings are not required. The Directive also requires water authorities to include a summary of comments provided by the public and to inform whether public comments have been considered (Annex VII A 9 WFD). However, member states' water authorities are not explicitly encouraged in the Directive to involve the public in developing plans of measures. The implementation guideline on participation, however, also emphasises the importance of involvement during the elaboration of those documents (European Commission 2003: 31).

Third, Art. 14(1) WFD stipulates that "Member States shall encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the river basin management plans". As compared to public hearings, the phrase 'shall encourage' is much weaker than 'ensure' (used for the public comment provisions), suggesting a different status to legally binding and legal pressure to implement active involvement in European water governance. Not surprisingly, legal experts conclude

that, "the obligation to encourage involvement falls short of a duty to ensure that this actually occurs and the WFD itself gives no further indication as to what kind of 'encouragement' is needed" (Howarth 2009: 404). Problem-solving capabilities and having a stake constitute the boundaries between different definitions of 'public' in the Directive. Interested parties are defined as "any person, group or organisation with an interest or 'stake' in an issue, either because they will be directly affected or because they may have some influence on its outcome ... Essential to active involvement is the potential for participants to influence the process" (European Commission 2003: 10-11).

In brief, public participation in WFD water management involves varying forms of public engagement and different degrees of legal compulsion to put those provisions into practice. In the following section, we develop a framework with a view to evaluate public participation during the implementation of the Directive in England and Wales.

At first glance, river basin management planning in England and Wales reflects the requirements of the Directive for public participation and stakeholder involvement. Implementation has involved the establishment of eleven RBDs at sub-national level, with one, the Solway Tweed, shared with Scotland. These institutions have similarities with the ten public sector Regional Water Authorities established in 1974. UK water management has remained essentially watershed-based through many administrative changes to the present. Although consultations have taken place both at RBD and national level, stakeholder involvement occurs largely in so-called river basin liaison panels. These multi-actor panels, steered by the Environment Agency (EA), are utilised as forums to discuss draft RBMPs and are involved in monitoring and enforcement of plan implementation. As will be discussed more extensively below, other mechanisms were established to fulfil the requirements of the Directive, most notably public information provision and consultations with the wider public on documents prepared during the planning phase.

Together these participatory approaches, involving innovative institutions and multiple actors at RBD scale, can be evaluated in terms of their overall achievements. However, differing perspectives exist within the literature on participation on how this notion can be assessed in practice – a feature we discuss in the next section.

Evaluating participation

Differing empirical indicators have been employed to gauge the achievements of public participation in environmental management. In this study, we broadly draw on a framework proposed by Sabatier et al. (2005: 14) for analysing the factors contributing to effective 'collaborative [i.e. participative] watershed management', by synthesising normatively desirable features of process and process design, community attributes, policy outputs and environmental outcomes.

To an extent, all these factors have featured in attempts to measure the success of participatory decision making. With regards to 'process' the legal requirements of the WFD may serve as an obvious first point of departure. They represent, at least from a Commission perspective, a political goal. However, the provisions on participation alone hardly make for an applicable framework because they do not account for cases of over- or underimplementation. Furthermore, as a framework directive, the WFD provides considerable scope for national authorities to adapt EU requirements for national contexts. The Directive therefore remains purposefully vague when it comes to the details of information, consultation and involvement. The Common Implementation Strategy guidance document on participation (European Commission 2003) is more helpful here and resonates well with past scholarship which focuses on process characteristics such as power transfer or equality. Arnstein (1969), for instance, analyses the degree of decision-making competences held by participants. Rowe and Frewer (2005), in contrast, use the flow of information between state and non-state actors as a potential yardstick while Renn, Webler and Wiedemann (1995) evaluate the right of all non-state actors to participate and influence the process and its outcomes in a fair way. Other authors emphasise representativeness (Samuelson et al. 2005) and highlight the importance of local actors being involved in participatory decision making (Conley and Moote 2003: 376).

Scholarship has also sought to measure the success of participatory arrangements through the examination of 'community attributes' such as trust building and learning, i.e. potential social effects of participatory governance. Leach and Sabatier (2005), for example, evaluate collaborative partnerships through examining their relationship with stakeholder trust and social capital. Another aspect of successful participation identified is learning. Different types and degrees of learning are apparent (May 1992), from instrumental (i.e. single-loop),

political and transformative (i.e. double-loop) – the latter argued to be more significant in finding enduring solutions to complex environmental issues (Collins et al. 2007).

Researchers have focused on other effects as indicators of participatory governance. Koontz and Thomas (2006: 115) call for a new research agenda that emphasises the environmental 'outputs' of participatory decision making, for example the formulation of management agreements and projects, in addition to public policy change and programme implementation. Level of agreement between participants actors and implementation of 'restoration projects designed to improve local environmental or social conditions' are deemed critical indicators of successful water management in the USA (Leach and Sabatier 2005: 240). Newig and Fritsch (2009) provide further empirical evidence based on a large dataset of case studies.

With regards to environmental outcomes, Koontz and Thomas (2006: 111) observe that while public participation has been promoted 'as an alternative to centralized planning and command and control regulation... the excitement over participatory processes has not been matched by evidence that these processes actually improve the environment'. Their prescription is greater consideration of the extent to which participation results in environmental improvements. But as Koontz and Thomas show, conspicuous constraints pertain to using this indicator, most notably data collection, the long run nature of participatory management cycles and separating out the effects of participation on environmental quality from other intervening factors (*ibid.*). Faced with this problem, Leach and Sabatier (2005) suggest that stakeholders' perceptions of the impacts of participation on environmental quality can be employed as a proxy. However, any investigations must be sensitive to differences between perceived and actual effects of participation (Koontz and Thomas 2006). Biases may pertain to participatory processes such as so-called 'halo effects' (Leach and Sabatier 2005) and 'cognitive dissonance' (Coglianese 2003), meaning stakeholders and researchers view participation only in positive terms.

Together these features provide useful conceptual yardsticks to measure the success of participation in WFD river basin management planning. Rather than relying on approaches using one variable as a proxy for successful participatory governance, this study uses a multi-dimensional model broadly based on the conceptual framework of factors identified by Sabatier et al. (2005). With a view to provide a more nuanced perspective, we synthesise process, community, output and outcome related indicators. Table 1 summarises our

analytical framework which we will apply in the remainder of the article on three case studies of WFD implementation in England and Wales.

Dimension	Indicators
Process	Establishment of participatory processes and institutions
	Power transfer
	Information flow
	Equality
	Representativeness
Community	Trust
	Learning
Outputs	Adoption of management plan
	Ambition of implementing measures
Outcomes	Perceptions of plan quality
	Improvements in environmental quality

Table 1: Framework for assessing the success of participation in WFD implementation (adapted from Conley and Moote 2003; Sabatier et al. 2005; Leach and Sabatier 2005; Koontz and Thomas 2006).

Data and methods

This research relies on a multiple case study design. As it was prohibitive to conduct an indepth assessment of public participation and stakeholder involvement in all eleven RBDs in England and Wales, we selected three cases on the basis of their differing geographical, biophysical and socio-political features.

Case studies

The first case, the Anglian RBD, extends across 27,900 square kilometres and covers, fully or partly, counties such as Lincolnshire, Essex and Norfolk. Approximately 5.2 million people live within the RBD, primarily in small or medium sized towns and cities although the region is mostly rural with no large urban areas. Over half of the land area, some 1.5 million hectares, within the RBD is given over to agricultural or horticultural industries. In geophysical terms, the landscape includes undulating chalk and limestone areas but is predominantly flat with extensive lowlands and the East Anglian coastal zone. Approximately 67 per cent of total waters in the RBD have been designated as heavily modified or artificial (Environment Agency 2009a).

The Humber river basin district covers some 26,100 square kilometres and includes urban centres such as Birmingham, Sheffield, and Leeds. 10.8 million people inhabit the area; business services and health are key sectors. A couple of decades ago, the region had been a strong player in mineral and coal mining, sectors which are in decline these days. Apart from diffuse pollution through agriculture, main challenges to good water quality are pollution accruing from disused mines, sewage disposal works and diffuse urban sources. The region is characterised by an extraordinary high level of physically modified water bodies (Environment Agency 2009b).

The South West RBD extends over 21,000 square kilometres and includes Cornwall, Dorset, Devon and parts of Hampshire, Somerset and Wiltshire. Although predominantly rural, the RBD nonetheless contains several urban areas, most notably Plymouth, the Bournemouth/Poole conurbation, and Exeter. Diffuse water pollution from agriculture, pollution from mine workings in Cornwall, point source discharges from sewage works and also the heavy modification of some water systems are the main challenges in the South West RBD (Environment Agency 2009c).

Research methods

We use three methods to study participation within these cases, combining desk based studies with interviewing techniques. First, quantitative data for each case was developed by generating a nationwide database of institutions and implementing measures to assess the initial RBMP phase, from 2006 until 2009. To this end, we extracted information from RBMPs and consultation response documents published by the EA for each RBD. The above-mentioned WFD requirements structured our data collection strategy: to enable public access to planning information, to consult the public during the planning process, and to encourage the active involvement of stakeholders in planning and plan implementation. With regards to 'information', we assessed whether consultation documents had been made publicly available online and in public libraries; the nature and type of information put online by the competent authority, including WFD background information, maps, environmental reports and minutes of stakeholder panel meetings; and, finally, the EA's interaction with the media when it came to WFD-related activities. The data we gathered on 'consultation' cover the number of newspaper adverts, direct mail initiatives and written responses received in total and are specific to each RBD. We also quantified various types of consultation, e.g. public hearings,

drop-in surgeries, and public and sectoral workshops, for three rounds of consultation in each RBD. As to 'active involvement', we counted the number of meetings held and stakeholders invited, and also compared participation patterns across sectors and RBDs.

Second, qualitative data on the 'process' and 'community' attributes of the central participatory institutions in England and Wales, liaison panels at RBD level, were generated through semi-structured interviews with key stakeholders in each RBD. In total, we conducted over 40 interviews. Respondents were chosen to represent a cross-section of different actors in the panels and were generally involved in all the panel meetings from 2006 until 2011. In addition, we carried out interviews with lead officials in river basin districts other than Anglia, the Humber, and the South West. This was to ensure that our findings were representative for England and Wales. Our interview protocol focused on the degree of learning occurring, levels of trust and reciprocity amongst participants, their perceptions on the representativeness of the process, knowledge of the environmental problems, and how stakeholders perceived the impacts of involvement on the plan quality. In order to analyse our data we coded interviewee responses according to the analytical framework.

Finally, quantitative data on plan outputs and water quality outcomes in the three case studies was researched using EA documents published online. A desk based study recorded plan characteristics, including programmes of measures, and water quality data from the three cases.

Findings and discussion

In this section we compare the Anglian, Humber and South West RBDs against the criteria developed for the four dimensions of participatory environmental governance: process, community, output, and outcome.

Process

The 'process' dimension refers to the establishment of participatory processes and respective institutions. This feature requires analysing WFD water planning in terms of 'information', 'consultation', and 'active involvement'.

Apart from information directly relevant for public comment, Article 14(1) WFD requires that domestic authorities make important background information publicly available. Our evidence suggests that this requirement was fully implemented and put into practice in England and Wales. On the one hand, the EA prepared three main planning consultation documents for each RBD, representing the different stages of the planning process: the 'Working Together' document, the 'Significant Water Management Issues' document, and the draft RBMP. In all RBDs copies of those three documents were made accessible via the EA website, in EA head and regional offices, and in public libraries. The agency also encouraged local communities to establish internet links from municipality websites to EA consultation documents. On the other hand, the EA used the internet in order to provide more generally planning-relevant information to the wider public. This source included background information on the WFD, regional facts about the planning process, and more detailed technical data on the status of various water bodies and risks to water quality. Furthermore, the EA made available for download the minutes of RBD liaison panels, although there was some variance across RBDs. According to EA documents, the Agency took proactive efforts to inform the public through local and regional media such as newspapers, newsletters, magazines and radio. Table 2 summarises our findings on 'information':

Information	Anglian	Humber	South West
Copies of the three	consultation documer	nts	
Available at EA website and head offices	✓	~	~
Available at EA head and regional offices	V	~	~
Available at public libraries	V	~	~
EA	website		
Provides WFD background information	V	~	~
Provides regional background information	V	~	~
Provides interactive data search and maps	~	~	~
Provides technical information	~	~	~
Provides environmental reports	V	~	~
Provides minutes of Liaison Panel and Area Advisory Group meetings	5	13	9
Media appi	roached by EA	l	
Newspapers	V	~	-
Newsletters and magazines	V	-	-
Radio	~	~	-
Television	-	-	-
Other	publicity	L	1
Photography competition	V	~	~

Table 2: Summary of measures undertaken for public information provision.

According to Article 14(1) WFD, member states are required to organise public consultations on river basin planning. The EA fully complied with EU legislation and invited public comments on three consultation documents: the 'Working Together' document, a strategy paper outlining timescales, modes of involvement in each RBD, and deliverables to be expected at the end of the first cycle of WFD water planning; a 'Summary of Significant Water Management Issues', a paper to be developed jointly with the RBD liaison panel that highlighted the most challenging problems in each RBD and discussed heavily modified water bodies in the region; and the draft RBMP documenting proposed actions to be taken. In order to promote the wide participation of citizens and organised stakeholders, the EA placed notices in local media and sent a small number of copies directly to relevant organisations. Response rates, however, were low, with the Anglian document only receiving 16 submissions of which only 6 referred to this RBD specifically. Moreover, a majority of responses came from organised stakeholders rather than the 'public'; a trend reflected in the Humber and South West RBDs. In fact, response rates were little better for the 'Significant Water Management Issue' document in the RBDs. The draft RBMPs received a higher

number of responses: 142 in the Anglian RBD, 175 in the Humber RBD, and 85 in the South West. Furthermore, the EA organised public workshops on specific topics such as alien species, diffuse pollution or mine waters and workshops dedicated to specific stakeholder groups such as the water industry or recreational groups. The EA seemed to acknowledge that the consultations had not been a major success, with one respondent stating: "That's probably where we, I wouldn't say struggled, but maybe that's where we have had our weakest link until now." A stakeholder in the Humber basin argued that low response rates could be attributed to the technical jargon of the consultation documents: "I think there could have been more creative ways to communicate what the plan was about." However, it is debatable whether low consultation turnouts can fully be explained by the EA's limitations in communicating effectively with the wider public. The experiences that green organisations had during the Our Rivers campaign as well as interview data with panel members and other non-state actors suggest that there was a general lack of interest in water-related questions. Previous scholarship reports similar findings for the Netherlands and the Czech Republic (van der Heijden and ten Heuvelhof 2012; Slavíková and Jílková 2011). We summarise our findings on 'consultation' in Table 3:

Consultation	Anglian	Humber	South West
Working Toge	ether document		l
Period of consultation (December 2006 - June 2007)	~	~	~
Number of newspapers advertised in for public notice	1	2	3
Duration of newspaper advertisments in weeks	2	1	1
Number of direct mail out of copies sent to stakeholders	137	201	100
Number of total responses	16	22	20
Number of responses specific to RBD	6	10	12
Type of respondents	MO	MO	О
Significant Water Mana	ngement Issue docur	nent	1
Period of consultation (July 2007 - January 2008)	~	V	~
Number of newspapers advertised in for public notice	1	2	3
Duration of newspaper advertisments in weeks	2	1	1
Number of direct mail out of copies sent to stakeholders	42	201	200
Number of total responses	39	34	40
Number of responses specific to RBD	20	18	23
Type of respondents	О	О	O&I
Draft	RBMP	l	1
Period of consultation (December 2008 - June 2009)	~	V	V
Number of newspapers advertised in for public notice	1	2	2
Duration of newspaper advertisments in weeks	2	2	2
Number of direct mail out of copies sent to stakeholders	42	?	200
Number of total responses	142	175	85
Type of respondents		0	
Oral con	sultation		
Numbr of sector workshops	40	10	19
Number of public workshops	0	0	0
Number of drop-in surgeries	0	0	0

Table 3: Summary of measures taken for consultation. O = organised stakeholders (more than 90 per cent of responses were from organised stakeholders), MO = mostly organised stakeholders (more than 50 per cent of responses were from organised stakeholders), O&I = organised stakeholders and individuals (responses were unevenly distributed between organisations and individuals).

Finally, Article 14(1) WFD stipulates that "Member States shall encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the river basin management plans". As a consequence, water management authorities in England and Wales established liaison panels at national level and in each RBD, including the three basins under investigation in this article. RBD liaison panels are expected to discuss the content of the RBMP as well as the measures needed to achieve the plan's objectives. Furthermore, the panels negotiate the

implementation, monitoring and funding mechanisms, and contribute to the enforcement of management activities. Although the panels are exposed to a number of political expectations and demands, legal responsibility lies solely with the EA. In this sense, all liaison panels are purely advisory (Department for Environment Food and Rural Affairs 2006: 40).

The panels operate on a representational basis, with each member representing the views of their designated sector and providing a conduit for negotiation with the panel. Our evidence shows that panels met a similar number of times but there was wide variation in membership (ranging from 27 to 15 seats). Most sectors were represented on the panels, although the interests of some sectors overlapped with others, for instance farming vis-a-vis rural businesses and landowners. On balance, however, some sectors tended to be overrepresented in the panels. For example, in the Anglian panel central, regional and local government had thirteen seats between them, business (including farming) seven seats, while green NGOs had only one representative. However, in contrast to the Netherlands, where authors relate overrepresentation of sectoral interests and power imbalances to features of corporatist political systems (van der Heijden and ten Heuvelhof 2012), potential overrepresentation in liaison panels in England and Wales are solely due to decisions made by the EA's head office. This is because the EA's national office provided templates to offices at RBD level which provide little scope for discretion. Yet, we must be mindful of conflating representation with meaningful participation. Although some sectors, such as local governments, were nominally over-represented in terms of seats our research suggests that they were often not as powerful as other actors such as the EA.

Generally, the non-organised 'public' had no representation. Effective representation also appeared constrained because some stakeholders had to speak on behalf of a diversity of group members, with the attendant problem of coordinating responses. For instance, in the Humber basin one seat in the panel was reserved for green groups only. This feature meant that environmental NGOs, who took turns occupying the 'green seat', had to mediate the diverse political goals and interests of other organisations within this sector. More critically from a participation perspective, almost all interviewees questioned the lack of genuine public or community representation in the panels while recognising the practical problems such modes of governance entail. Such a conundrum reflects a significant problem inherent in the UK system, and the notion of public participation more widely, namely how to balance the requirement for genuine democratic input with the need to take effective and timely

management decisions. As one respondent argued, it would be optimal to increase community representation but "the difficulty is in trying to get their views without making the committee enormous because if you have 50-60 people in the room, you don't get a very good meeting."

Another issue would be engaging with communities, with interviewees recognising that the higher strategic level of planning in the RBD was failing to reach out to local people who only tended to get involved where their local situations were affected. Although attendance rates in the Humber panel were generally high, representatives of local communities and the regional assemblies showed very inconsistent engagement patterns. This situation occurred because local communities struggled with their roles. While local delegates were well aware that much was at stake for communities during the WFD implementation, they completely failed to link their interests and functions to the panel discussions. Interviews suggest that, on the one hand, the abstract level of discussions made it difficult to link WFD activities to concrete local actions. On the other hand, local policy makers, who are oftentimes generalists rather than specialists on water or ecology, had considerable problems in following the debates and developing opinions. As one respondent noted: "I found it quite difficult to describe why I was there or what I felt, what I needed to understand, I struggled a little bit sometimes ... The whole series of debates like what is an artificial water body, you know, I am sorry, but do I care? I recognise the importance. But this was a very arcane scientific debate, and I kept asking that, I asked several times: What are the implications for a mayor? ... I don't know why I had to be there."

To remedy this situation, Orr et al. (2007) recommend a multi-scale approach, whereby community scale discussions focus on local management solutions that can feed into higher regional scale planning. There is some evidence that government policy is now moving in this direction, with greater promotion of the local 'catchment model' within UK river basin planning, although transaction costs and technical capacity are potential inhibitors (Benson et al. 2013).

Alongside panel meetings, members engaged in sector meetings to collect views and comments for feedback during panel meetings and in one-to-one meetings with RBD WFD project managers. Issue group meetings or workshops were also held to discuss specific

topics in more detail with experts or stakeholders. Table 4 aggregates our findings on 'active involvement':

Active involvement	Anglian	Humber	South West
RBD	iaison panels		
Establishment of RBD liaison panels	~	~	~
Number of meetings	11	13	13
Number of members	27 (5)	14 (3)	15
Composition of RBD liaison pa	nels (numbers of seats	per actor group)	
EA	1	1	1
Local authorities	1	1	1
Regional Assembly	2	2	0
Regional Development Agency	2	0	1
Natural England	3 (2)	2(1)	1
Environmental NGOs	1	3(1)	1
National parks	1	0	0
Recreation	1	0	0
Coast	0	0	1
Rivers and waterways	1	1	0
Business and industry	1	2	1
Rural businesses and landowners	1	1	1
Farming	1	1	1
Freshwater fisheries and riparian owners	0	0	1
Ports	1	2 (1)	1
Mining	2	0	1
Water companies	1	2	2
Consumer Council for Water	1	1	1
Othe	er activities	l	1
Sector and one-to-one meetings	~	~	~
Number of issue-specific meetings and workshop	0	5	0

Table 4: Summary of measures taken for active involvement. Figures in brackets represent numbers of former panel members; new panel members have come to replace them.

While our analysis shows that the EA had successfully implemented key requirements of the directive, participation could be considered much less favourable when examined in more detail. Ker Rault and Jeffrey (2008) argue that public participation under the WFD could be reduced to what they call the 'letter of the law', whereby requirements are implemented through a 'tick box' activity. This feature was not entirely evident in the case studies, with the EA formally implementing participatory approaches more in line with the 'spirit of the law'. The focus, however, was generally on stakeholder engagement, with little meaningful public

involvement, a factor highlighted by interviewees – "The EA's approach has been to go for the 'usual suspects'. So you've got the water companies, ourselves and local authorities lined up [...] but I think probably by modern standards it's missing a bit in terms of broader engagement." – and in marked contrast to participatory catchment management in other countries (for example, Sabatier et al. 2005; Margerum 2011).

Community

Active involvement could be considered partly successful if one looked at factors such as the community attributes of the participatory process. Our data clearly shows evidence of learning in the river basin liaison panels. Political learning, the acquisition of knowledge about political viewpoints held by other stakeholders, was seemingly enhanced. For example, one interviewee argued that: "Inevitably, the more you hear the perspectives of others, the more you know, the better you understand them."

But the degree of success is more questionable when other forms of learning are considered. Instrumental learning, involving the acquisition of new knowledge, was quite limited since most stakeholders either possessed high degrees of technical expertise or none at all. For example, one industry respondent from the South West RBD noted that "Not much [was learnt] but only because of my background". Others, in particular stakeholders with a more general profile, for example those representing local communities or local authorities, experienced major problems in learning from panel discussions. In their view, this undermined their ability to represent their constituency effectively with one participant stating that: "I think there were very little political considerations, it was very technical ... It was very difficult for people, unless they are specialists. I found it difficult at times myself because I am a non-specialist in these areas. I found it quite difficult to understand sometimes what actually was going on at the panel meeting, what was actually being discussed, what the implications would be." Yet, some interviewees felt that new knowledge from other participants was gained. An industry representative suggested that: "It was valuable to work closely with environmental groups and to understand their aims better." In the Humber RBD, participants suggested that they mainly learned about the WFD itself and the political, economic and ecological implications for their constituency.

Transformative learning, characterised by deeper changes in individual values followed by behavioural modification, seemed similarly constrained by the expertise of participants; many of whom already had in depth knowledge of all aspects of river basins. Others felt excluded by the technical character of the debates, which were largely framed centrally by the EA. One Humber panel member argued that there was "no discussion, [only] single interests voiced their concerns". Although, of course, some stakeholders shared similar interests and political positions, participants did not attempt to coordinate themselves. Sectoral interests, according to another interviewee, felt like a "lonely voice within the panel", implying low deliberative quality.

Trust amongst stakeholders is also argued to be to a critical indicator of successful participation (Leach and Sabatier 2005). Some interview evidence from the Anglian RBD showed that trust was enhanced in the liaison panels, with reciprocal relationships strengthened amongst members. According to one interviewee "the liaison panel is a very cohesive group of individuals". Furthermore, interviewees stated that working relationships between stakeholders had improved through interaction in the panels thereby increasing the degree of trust. Respondents suggested that having direct points of contact in other organisations meant that they could obtain more rapid responses to specific issues than in the past. As a result, increased trust had also led to more efficient conflict resolution with interviewees stating discussions generally avoided confrontation and made reaching consensus much easier. However, data from the Humber did not confirm these observations. Given that the panel provided few opportunities for deliberation, discussion and engagement, stakeholders put a high premium on attending the panel and extracting information but attached less importance on group and trust building. Consequently, organisations as such were present at the panel but there was a high level of fluctuation among stakeholders. High fluctuation rates also characterised the EA's involvement in the panel. In particular, the change of the position of the river basin district manager was criticised by various panel members. Interviews suggest that this was not a peculiarity of the Humber basin, but a general feature of other English and Welsh basins too.

Outputs

Unlike the situation in several other EU member states, river basin management plans for England and Wales were published on time in 2009, as required by the WFD. Plans for each

RBD contained all the requisite information, including details of programmes of measures for meeting water quality objectives. On this basis, the participative process outlined above may be considered successful. However, during the interviews participants expressed their concerns that the process had only marginally influenced plan production. Respondents typically argued that planning reflected over-riding national objectives and had followed a pre-designed agenda determined by the EA central office that was more concerned with ticking boxes specified by the WFD and therefore issued templates for draft RBMPs. Research carried out by van der Heijden and ten Heuvelhof (2012) suggests that this dynamic can be observed in the Netherlands as well.

Hence, interview responses were mixed regarding whether stakeholder involvement had contributed to plan quality. For example, when questioned one responded: "Oh yes, definitely. Without it, it would have been a very different game." Respondents described how different viewpoints and indigenous knowledge were incorporated. Liaison panel meeting minutes give evidence that amendments, mainly in the form of changes to wording, were made to draft plans. Other interviewees in the South West and Humber RBDs, in contrast, argued that contributions to the quality of plans were marginal because the plan agendas were centrally determined and that the EA, not liaison panels, were responsible for final decisionmaking. For one respondent in the South West "the stakeholder engagement was a formality to be undertaken so it could be reported that it had happened. I don't believe stakeholders had much effect at all, as most of the things the environmentally aware members wanted were not acted upon." In the Humber RBD, top-down framing through the EA's head office and a technocratic way of handling the panel resulted in high degrees of disappointment among stakeholders and a lack of ownership for the final product of the panel, the RBMP. Panel members therefore collectively refused to sign the plan upon completion: "The liaison panel members couldn't be seen to have written the plan or to have some sort of responsibility for delivering the plan." As a consequence, green stakeholders in particular on the panel felt there was a strategic conflict between participation in the panels and more radical action outside the panels (Parés 2011 reports similar experiences in Spain).

Outcomes

Evaluating the impact of management plans on environmental quality is, as discussed above, problematic. Although the EA has committed itself to annually reporting progress against

water quality objectives, a full assessment will only be conducted after the end of the first WFD planning cycle in 2015. Nonetheless, data exist on preliminary progress up to 2012 (Environment Agency 2012). Table 5 shows the percentage of RBD surface waters meeting good ecological status or better in 2009 and 2012. The figures would imply no real change but it is far too early to make any judgement of how well RBMP is working, reflecting arguments in the literature regarding the problems of relying on such measures (for example, Koontz and Thomas 2006).

River basin district	2009	2012
Anglian	18	18
Humber	18	18
South West	33	32

Table 5: Percentage of RBD surface water bodies at good ecological status or better.

Conclusions

One leading example of participatory catchment management occurs under the EU Water Framework Directive but valid questions arise over the success of involvement in practice. By evaluating participatory processes, community attributes, outputs and outcomes, it could be argued that initial implementation of RBMP in England and Wales enjoyed mixed success, thereby reflecting earlier critiques (for example, Woods 2008). On one hand, WFD legal requirements for providing public information, consulting with the public and involving stakeholders have been met (i.e. to the 'letter of the law') or even exceeded, leading to some learning, trust and knowledge acquisition amongst participants. But on the other hand, engagement via liaison panels did not widely include the public or community groups, was technocratic and centrally determined, at times lacked representativeness, and resulted in only limited learning. The overall impression is one of an agency-led or technical approach, which while exhibiting broad features of participatory governance, still lacks the genuine community buy-in envisaged by normative models of participation. Indeed, other research shows that more community-led catchment management in England and Wales has only limited connectivity to the WFD process (Cook et al. 2012). The mechanisms for this potential connectivity are complicated, and potentially involve voluntary sector engagement, although not all voluntary sector bodies may be fit for purpose due to such issues as funding, expertise, mission, or scale of operation and there remains suspicion in some quarters of 'official' bodies (ibid.). In this respect, we would recommend evolution rather than revolution in taking RBMP forward in its current implementation phase.

If more participation is considered a normative goal, how then could it be enhanced to overcome the evident dissatisfaction of some stakeholders? In this respect, we could forward two potential strategies for the UK context. Firstly, when considering process, greater efforts should be made to include community groups and public representatives in stakeholder engagement to make participatory governance more multi-level and multi-actor. As genuinely participatory processes attempt to reconcile the interests of all stakeholders, mechanisms could be introduced by the Directive to promote community level interaction, although these would have to recognise attendant 'transaction costs' involved (see Crase et al. 2013; Roggero and Fritsch 2010). While the Directive does identify sub-river basin planning, its focus on regional scale reporting institutions could be modified to incorporate lower level catchment scale planning that is more connected to local communities (House of Lords European Union Committee 2012). Secondly, a significant constraint however will be building technical capacity and financing initiatives on the ground (ibid.). The EU could, on the basis of comparative evidence from the USA and Australia, provide more of a lead through integrating the WFD with existing funding policies (Benson et al. 2012). National UK policy appears to be already heading in both these directions with the creation of 25 demonstration catchments, and the announcement made in the UK Government's 2011 White Paper on water that 100 sub-regional catchment bodies will be promoted from 2013 onwards, in support of WFD implementation (Department for Environment, Food and Rural Affairs 2011). While this 'catchment based approach' policy is yet to be fully implemented, it does at least hold out the possibility of moving river basin management planning beyond a technically driven, regional scale form of participation featuring the 'usual suspects' (see Sherlock et al. 2004 for a discussion) to more multi-level, inclusive community based governance.

Our analysis also highlights several potentially profitable avenues for future research related to participation processes, communities, outputs and outcomes within the WFD implementation. Investigations could, for example, focus on the establishment of participatory processes and institutions, power transfers between stakeholders, information flows, degrees of decision making (in)equality and, most saliently, representativeness – a conspicuous issue evident from our research. A particular matter for investigation is how

better to facilitate community and local government actor engagement to enhance representativeness in future implementation rounds. Community attributes such as trust and learning, while already the subject of research on environmental management, also deserve greater attention within the WFD context. Another underdeveloped area of potential investigation is the relative ambition of planning outputs relative to actual production. Finally, assessing environmental outcomes provides scope for long run, time series analyses that would complement the cyclical scales of the WFD implementation and aid future policy development. Valuable lessons could also be drawn for policy as participation continues to assume a 'paradigmatic' position in wider environmental governance strategies globally.

References

Albrecht, J. 2013. The Europeanization of water law by the Water Framework Directive: a second chance for water planning in Germany. Land Use Policy 30: 381–391.

Aldred, J. and Jacobs, M. 2000. Citizens and wetlands: evaluating the Ely citizens' jury. Ecological Economics 34: 217-32.

Andersson, I., Peterssona, M. and Jarsjö, J. (2012) Impact of the European Water Framework Directive on local-level water management: case study Oxunda catchment, Sweden. Land Use Policy 29: 73–82.

Arnstein, S.R. 1969. A ladder of citizen participation. Journal of the American Institute of Planners 35 (4): 216-224.

Benson, D. and Jordan, A. 2008. Understanding task allocation in the European Union: exploring the value of federal theory. Journal of European Public Policy 15 (1): 1-20.

Benson, D., Jordan, A. and Huitema, D. 2012. Involving the public in catchment management: an analysis of the scope for learning lessons from abroad. Environmental Policy and Governance 22 (1): 42-54.

Benson, D., Jordan, A. Cook, H., and Smith, L. 2013. Collaborative environmental governance: Are watershed partnerships swimming or are they sinking? Land Use Policy 30 (1): 748-757.

Beunen, R., van der Knaap, W.G.M. and Biesbroek, G.R. 2009. Implementation and integration of EU environmental directives: experiences from the Netherlands. Environmental Policy and Governance 19: 57-69.

Blackstock, K.L. and Carter, C.E. 2007. Operationalising sustainability science for a sustainability directive? Reflecting on three pilot projects. Geographical Journal 173: 343-57.

Carr, D. S., Selin, S. W., and Schuett, M. A. (1998). Managing public forests: Understanding the role of collaborative planning. Environmental Management 22, 767-776.

Carter, J. and Howe, J. 2006. Stakeholder participation and the Water Framework Directive: the case of the Ribble pilot. Local Environment 11: 217-31.

Coglianese, G. 2003. Is satisfaction success? Evaluating public participation in regulatory policymaking. In O'Leary, R. and Bingham, L.B. (eds.) The promise and performance of environmental conflict resolution. Washington, DC: Resources for the Future, pp. 69–86.

Collins, K., Blackmore, C., Morris, D. and Watson, D. 2007. A systemic approach to managing multiple perspectives and stakeholding in water catchments: some findings from three UK case studies. Environmental Science & Policy 10: 564-74.

Conley, A. and Moote, M.A. 2003. Evaluating collaborative natural resource management. Society and Natural Resources 16: 371-386.

Cook, H.F., Benson, D., Inman, A., Jordan, A. and Smith, L. 2012. Catchment management groups in England and Wales: extent, roles and influence. Water and Environment Journal, 26 (1): 47-55.

Crase, L., O'Keefe, S. and Dollery, B. (2013) 'Talk is cheap, or is it? The cost of consulting about uncertain reallocation of water in the Murray–Darling Basin, Australia'. Ecological Economics 88: 206–213

Department for Environment, Food and Rural Affairs 2006. River basin planning guidance. London: Defra.

Department for Environment, Food and Rural Affairs 2011. Water White Paper – Water for life. London: Defra.

Environment Agency 2009a. Water for life and livelihoods: River Basin Management Plan – Anglian River Basin District. Bristol: EA.

Environment Agency 2009b. Water for life and livelihoods: River Basin Management Plan – Humber River Basin District. Bristol: EA.

Environment Agency 2009c. Water for life and livelihoods: River Basin Management Plan – South West River Basin District. Bristol: EA.

Environment Agency 2012. Summary of the 2012 WFD Classification for Surface Waters. Bristol: EA.

European Commission 2003. Common Implementation Strategy for the Water Framework Directive (2000/60/EC). Guidance document no. 8. Public participation in relation to the Water Framework Directive. Luxembourg: Office for Official Publications of the European Communities.

Fritsch, O. and Benson, D. 2013. Integrating the principles of IWRM? River basin planning in England and Wales, International Journal of Water Governance, 1 (3-4), 265-284.

Frame, T.M., Gunton, T., Day, J.C. 2004. The role of collaboration in environmental management: an evaluation of land and resource planning in British Columbia, Journal of Environmental Planning and Management, 47 (1), 59-82.

Gray, B. 2004. Strong opposition: frame-based resistance to collaboration. Journal of Community and Applied Social Psychology 14: 166-176.

House of Lords European Union Committee 2012. An indispensable resource: EU freshwater policy. 33rd report of session 2010-12. Norwich: HMSO.

Howarth, W. 2009. Aspirations and realities under the Water Framework Directive: proceduralisation, participation and practicalities. Journal of Environmental Law 21 (3), 391-417.

Kastens, B. and Newig, J. 2007. The Water Framework Directive and agricultural nitrate pollution: will great expectations in Brussels be dashed in Lower Saxony? European Environment 17: 231-46.

Kenyon, W. 2005. A critical review of citizens' juries: how useful are they in facilitating public participation in the EU Water Framework Directive? Journal of Environmental Planning and Management 48: 431-43.

Ker Rault, A. and Jeffrey, P.J. 2008. Deconstructing public participation in the Water Framework Directive: implementation and compliance with the letter or with the spirit of the law? Water and Environment Journal 22 (4): 241-249.

Keskitalo, E.C.H. and Pettersson, M. 2012. Implementing multi-level governance? The legal basis and implementation of the EU Water Framework Directive for forestry in Sweden. Environmental Policy and Governance 22: 90-103.

Koontz, T.M. and Thomas, C.W. 2006. What do we know and need to know about the environmental outcomes of collaborative management? Public Administration Review 66, special issue 1, 111-121.

Leach, W.D. and Sabatier, P.A. 2005. Are trust and social capital the keys to success? Watershed partnerships in California and Washington. In: Sabatier, P.A., Focht, W., Lubell, M., Trachtenberg, Z., Vedlitz, A., Matlock, M. (Eds.) Swimming upstream: collaborative approaches to watershed management. Cambridge MA: MIT Press, pp. 3-21.

Liefferink, D., Wiering, M. and Uitenboogaart, Y. 2012. The EU Water Framework Directive: a multi-dimensional analysis of implementation and domestic impact. Land Use Policy 28: 712–722.

Margerum, R.D. 2011. Beyond consensus: improving collaborative planning and management. Cambridge MA: MIT Press.

May, P.J. 1992. Policy learning and failure. Journal of Public Policy 12 (4): 331-354.

Moss, T. 2004. The governance of land use in river basins: prospects for overcoming problems of institutional interplay with the EU Water Framework Directive. Land Use Policy 21: 85-94.

Moss, T. 2012. Spatial fit from panacea to practice: implementing the EU Water Framework Directive. Ecology and Society 17 (3): 2.

Newig, J., Pahl-Wostl, C. and Sigel, K. 2005. The role of public participation in managing uncertainty in the implementation of the Water Framework Directive. European Environment 15: 333-43.

Newig, J. and Fritsch, O. 2009. Environmental governance: participatory, multi-level - and effective? Environmental Policy and Governance 19: 197-214.

Orr, P., Colvin, J. and King, J. 2007. Involving stakeholders in integrated river basin planning in England and Wales. Water Resources Management, 21(1), 331-349.

Parés, M. 2011. River basin management planning with participation in Europe: from contested hydro-politics to governance - beyond-the-state. European Planning Studies 19 (3): 457-478.

Rahaman, M.M., Varis, O. and Kajander, T. 2004. EU Water Framework Directive vs. integrated water resources management: the seven mismatches. Water Resources Development 20: 564-75.

Renn, O., Webler T. and Wiedemann, P. eds. 1995. Fairness and competence in citizen participation: evaluating models for environmental discourse. Dordrecht: Kluwer.

Renn, O. 2008. Risk governance: coping with uncertainty in a complex world. London: Earthscan.

Riley, J.M. 2002. Stakeholders in rural development: critical collaboration in state-NGO partnerships. London: Sage.

Robinson, L.W. and Berkes, F. 2011. Multi-level participation for building adaptive capacity: formal agency - community interactions in northern Kenya. Global Environmental Change 21, 1185-1194.

Roggero, M. 2013. Shifting troubles: decision-making versus implementation in participatory watershed governance. Environmental Policy and Governance 23: 63-74.

Roggero, M. and Fritsch, O. 2010. Mind the costs: rescaling and multi-level environmental governance in Venice Lagoon. Environmental Management 46 (1), 17-28.

Rowe, G. and Frewer, L.J.. 2005. A typology of public engagement mechanisms. Science, Technology, & Human Values 30 (2), 251-290.

Sabatier, P.A., Focht, W., Lubell, M., Trachtenberg, Z., Vedlitz, A., Matlock, M. 2005. Collaborative approaches to watershed management. In: Sabatier, P.A., Focht, W., Lubell, M., Trachtenberg, Z., Vedlitz, A., Matlock, M. (Eds.) Swimming upstream: collaborative approaches to watershed management. Cambridge MA: MIT Press, pp. 3-21.

Samuelson, C.D., Vedlitz, A., Whitten, G.D., Matlock, M., Alston, L.T., Peterson, T.R., and Gilbertz, S.J. (2005) Citizen participation and representation in collaborative engagement processes. In: Sabatier, P.A., Focht, W., Lubell, M., Trachtenberg, Z., Vedlitz, A., Matlock, M. (Eds.) Swimming upstream: collaborative approaches to watershed management. Cambridge MA: MIT Press, pp 137-169.

Sherlock, K.L, Kirk, E.A, and Reeves, A.D. 2004. Just the usual suspects? Partnerships and environmental regulation. Environment and Planning C 22(5): 651-666.

Slavíková L. and Jílková, J. 2011. Implementing the public participation principle into water management in the Czech Republic: a critical analysis. Regional Studies 45(4): 545–557.

Tippett, J., Searle, B., Pahl-Wostl, C. and Rees, Y. 2005. Social learning in public participation in river basin management - early findings from Harmonicop European case studies. Environmental Science & Policy 8: 287-99.

van der Heijden, J. and ten Heuvelhof, E. 2012. The mechanics of virtue: lessons on public participation from implementing the Water Framework Directive in the Netherlands. Environmental Policy and Governance 22: 177–188.

Warner, J. (ed.) 2007, Multi-stakeholder platforms for integrated water management. Aldershot: Ashgate.

Wesselink, A., Paavola, J., Fritsch, O. and Renn, O. 2011. Rationales for public participation in environmental policy and governance: practitioners' perspectives, Environment and Planning A 43 (11): 2688-2704.

Wondolleck, J.M. and Yaffee, S.L. 2000. Making collaboration work. Washington DC: Island Press.

Woods, D. 2008. Stakeholder involvement and public participation: a critique of Water Framework Directive arrangements in the United Kingdom. Water and Environment Journal, 22 (4), 258-264.

Wright, S. and Fritsch, O. 2011. Operationalising active involvement in the Water Framework Directive: why, when and how?, Ecological Economics 70 (12), 2268-2274.