# Factors Influencing the Frames and Approaches of Host Organizations for Collaborative Catchment Management in England

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# Factors Influencing the Frames and Approaches of Host Organizations for Collaborative Catchment Management in England

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*The frames and approaches adopted for collaborative catchment management (CCM) by 22 host organizations in England were examined. Hosts framed and approached CCM according to their particular funding arrangements, management priorities, actor networks, attitudes toward knowledge and uncertainty, and willingness to share power and take risks. The findings support the theory of path dependency, and indicate that the majority of hosts created CCM groups that were much narrower in scope, direction, and structure than had been envisaged by government policymakers. To address this, a new national policy framework for catchment management in England is recommended that defines guiding principles for collaboration and balances the needs for clear direction and discretion in policy implementation.*

A substantial body of research literature exists on collaborative resource planning and management, but little is known about the ways in which "collaboration" is actually interpreted or framed. "Frames" embody ideas, beliefs, preconceptions and assumptions about a situation and serve as important guides for the development of responses (Bardwell 1991). *Collaborative* management of whole catchment or watershed systems is still a relatively new concept, at least in a UK context, and it is important to examine the factors that shape the framing and development of this approach. In particular, attention should be given to the ways in which organizations that lead such initiatives understand and execute collaboration when they have extensive leeway and discretion due to an absence of government oversight and guidance.

This article examines how collaborative catchment management was framed and developed by organizations that undertook to host local initiatives following the establishment of the catchment-based approach (CaBA) by the UK government.

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On March 22 2011, the UK Secretary of State for Environment, Food and Rural Affairs announced the launch of CaBA:

> I believe that the approach we now need to try is a catchment-based approach . . . we need to set ourselves up to share evidence with local people to develop collective ownership of the problems and help them work together to develop and deliver solutions on their patch. (Benyon 2011)

The Secretary of State and officials from the Department for Environment, Food, and Rural Affairs (Defra) recognized that CaBA was a new approach to policy delivery, and that there were uncertainties regarding its implementation and likely impacts. Consequently, a policy framework was not published at that time. Broad intentions and expectations were, however, outlined in an initial position statement (Department for Environment, Food, and Rural Affairs 2011). The statement indicated that collaborative approaches should be developed to enable local organizations and groups to work in partnership with government agencies at a catchment scale. Policymakers proposed that such approaches could improve coordination, deliver integrated solutions, help to meet environmental objectives established under the European Union Water Framework Directive (WFD), and produce multiple benefits related to the use of catchment resources. Significantly, it was suggested that other organizations may be better placed than government and public agencies to undertake activities such as stakeholder engagement and group facilitation. As such, national government advocated collaborative catchment management, but did not provide an explicit definition or prescribe particular approaches.

To develop and test implementation strategies, a program that included a core group of 25 catchment management pilot schemes plus 37 additional catchment management initiatives was operated by Defra between July 2011 and December 2012. Public, private, and voluntary organizations were eligible to apply to host a catchment pilot or initiative, and applications were selected by policymakers in order to include a mix of situations from across the country. Each pilot project received £25,000 and was supported via a national program of learning events and evaluated by consultants hired by the government. The program was oversubscribed and, due to limited government funding, 37 additional initiatives received £5,000 and were not included in the learning program or formal policy evaluation. However, policymakers anticipated that the additional initiatives would provide further insights regarding collaborative catchment management. The additional initiatives provided a unique research opportunity to examine how host organizations framed and developed collaborative approaches for catchment management in the absence of direct influence from government departments, public agencies, or expert consultants. As such, this research focused on the host organizations for the additional initiatives rather than the pilot projects.

## The New Complexity of Water Management

Water management has become far more complex, uncertain, protracted, and difficult. Decision makers are confronted by a growing number of "wicked" or "messy" problems that require attention to be given to political, economic, social, and cultural factors, as well as technical and biophysical elements. Messy problems are notoriously difficult to resolve because of the competing goals of resource users and other actors, lack of understanding and scientific agreement on cause–effect relationships, limited time and

resources, and structural inequalities in access to information and the distribution of authority and power (Lachapelle et al. 2003). These kinds of conditions have become symptomatic of catchment management in many parts of the world.

Several factors appear to have contributed to these new circumstances. First, the interrelationships among the functions and uses of catchment resources have become more complex and uncertain, creating a "postnormal" operating environment. Scientific and technical knowledge can no longer be relied upon as the sole basis for decision making, and values and other forms of expertise have become increasingly important (Westra 1997).

Second, resource management has become increasingly difficult due to problems of poor "spatial fit" (Moss 2012). From a hydrologic perspective, catchment areas may be regarded as an ideal spatial unit of organization. However, other resource uses and functions related to agriculture, forestry, and land-use planning, for example, as well as broader political and administrative arrangements, are often structured in very different ways that do not fit easily with the institutional arrangements created for catchment or river basin management (Cohen and Davidson 2011). Attempts to align boundaries often encounter strong external opposition or result in problems being merely relocated, rather than resolved (Mitchell 2005).

Third, societal changes have added to the complexity of the management environment. The power to decide and control catchments has become fluidly dispersed so that no single organization, regardless of size or power, has the capacity to succeed by acting alone or to regulate the actions of the other agents within their shared domain (Trist 1980). Many institutional structures and processes for water management that are in place today were designed to function in stable conditions, and consequently have become outmoded (Watson et al. 2009).

The emergence of this type of environment, characterized by pervasive uncertainties, rapid and unpredictable change, and complex political, economic, and institutional regimes and ecological dynamics, raises fundamental questions about the adequacy of existing managerial approaches and creates new demands for innovation, including greater collaboration in policymaking and implementation (Connick and Innes 2003).

## The Nature of Collaboration

Significant interest has been shown in collaborative planning and management responses for complex problems (e.g., Huxham 1996; Wondollek and Yaffee 2000). Nevertheless, the term has rarely been defined clearly, and "co-management" is often used to describe a variety of approaches that may involve cooperation, coordination, or collaboration. However, Gray (1985, 912) did provide an explicit definition:

> By collaboration we mean: (1) the pooling of appreciations and/or tangible resources, e.g., information, money, labor etc., (2) by two or more stakeholders, (3) to solve a set of problems which neither can solve individually.

As such, collaboration is a distinct type of interaction whereby organizations and groups identify, and work closely together toward, a common objective. This is in sharp contrast to cooperation, whereby actors assist each other in achieving their separate objectives, or coordination, where polices, plans, or projects are aligned (Kanev et al. 2008). Collaboration is therefore based on a deep and richly joined multiparty relationship requiring attention to values, beliefs, and priorities, in

addition to sharing resources and knowledge. Furthermore, collaboration tends to be fluid, self-organizing, and unpredictable and to depend on social exchange mechanisms that involve communication and negotiation (Imperial 2005). Booher and Innes (2002) argued that collaborative processes share a common basis in "network power"—the ability to generate novel responses to environmental stresses by developing shared meanings and common heuristics that guide action. They identified three basic conditions needed to sustain network power: *diversity* of actors, knowledge, values, and resources; recognition of *interdependency*; and *authentic dialogue* based on open and honest communication (DIAD).

Learning has also been identified as an important aspect of collaborative resource management (Armitage et al. 2008; Raadgever et al. 2012). "Social learning" occurs when people engage with one another and share diverse perspectives as a basis for joint understanding and action and, according to Webler et al. (1995), includes two components. First, "cognitive enhancement" includes learning about personal values, beliefs and intentions and those of the other actors involved, in addition to acquiring technical knowledge. Second, "moral development" includes the ability to make wise ethical choices, showing respect toward others, creating a sense of group solidarity, integrating new cognitive knowledge, and learning how to interact. Moral development can lead to the generation of social capital and the transformation of relational practices, thus widening the range of policy options available, improving natural resource management outcomes, and creating an enduring capacity for problem solving (Pahl-Wostl and Hare 2004).

Participation of relevant actors and stakeholders is clearly important for the success of collaborative resource management. Applegate (1998) drew attention to potential limitations of participatory processes, such as the predominance of powerful organized groups, as well as opportunities for organizers or sponsors to set the agenda and orchestrate knowledge exchange. However, Tsouvalis and Waterton (2012) proposed a number of ideas to promote participation and collaboration in catchment management, including the creation of a vibrant and heterogeneous group or "collective," critical self-awareness and willingness to experiment, acceptance of uncertainty and different forms of knowledge production, and commitment toward lasting solutions rather than remedies for symptoms.

Overall, the literature indicates that collaboration is a distinct type of process that is complex, dynamic, iterative, and unpredictable, and has been used in a wide range of situations to address difficult resource management problems. This implies that collaboration may be interpreted and developed ("framed") in various ways that place different degrees of emphasis on aspects such as knowledge, dialogue, resources, learning, uncertainty, participation, and action.

## Approach and Methods

The study investigated how host organizations framed collaborative catchment management. The conceptual/analytical framework guiding this study (Figure 1) was developed from previously published research (McCann 1983; Selin and Chavez 1995; Watson 2004).

In brief, *contextual conditions* refer to the incentives and disincentives for collaboration created by prevailing legal, administrative and financial arrangements, perceptions of the condition of the catchment, and the nature of existing interorganizational relationships. Furthermore, temporal variations in contextual conditions
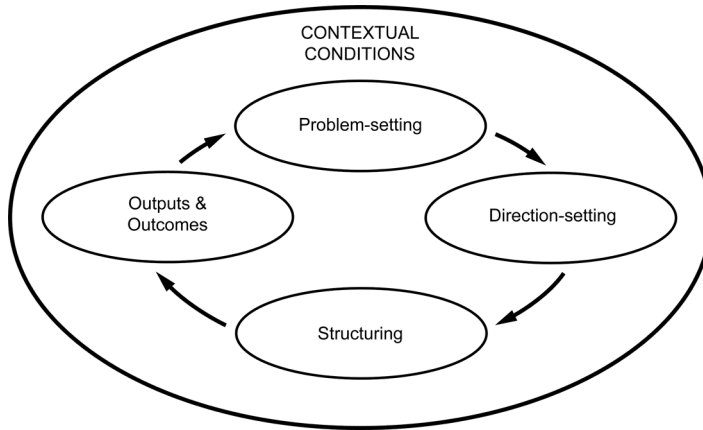
**Figure 1.** Conceptual/analytical framework.

may produce periods of rapid development, standing still or even reversal during a collaborative process. As such, contextual conditions influence the development and operation of the other illustrated components of collaboration. *Problem-setting* involves sharing knowledge, beliefs and ideas to develop a common understanding and "identity" for the issues or problems that confront the participants. Reaching agreement on the nature of the problem is identified in the literature as a key step in a collaborative process, and initiatives may be derailed if participants continue to subscribe to contradictory interpretations or explanations. *Direction-setting* involves the establishment of agreed superordinate goals or "ends." In order to generate lasting commitment, goals should reflect common aspirations that are considered worthwhile and feasible by the collaborators. *Structuring* refers to the establishment of multiparty structures, decision rules, and mechanisms for interaction and joint decision making. According to McCann (1983), structuring is often handled poorly because the designers of collaborative arrangements often rely too heavily on existing models that may place too much control in the hands of an inner circle of powerful actors. Lastly, *outputs* include the policies, plans, agreements, programs, and projects that are jointly created as a result of collaboration, while *outcomes* are actual changes in economic, social, environmental, or institutional conditions that emerge following implementation. The five different aspects are interdependent, suggesting that collaboration develops as an emergent, iterative, and nonlinear process. For example, depending on circumstances, some phases of activity may require more time and joint effort than others, and several cycles of the collaborative process may be necessary before goals and objectives are realized.

To apply this framework, research data were collected using in-depth semistructured interviews with leaders of organizations that hosted 22 of the 37 additional local catchment management initiatives. In four cases, participants also provided background material such as internal reports and minutes of meetings, and this was used as supplementary evidence. Care was taken to ensure that the sample included representatives for a range of urban, rural, and mixed catchment areas. Of the 22 initiatives, 18 were hosted by voluntary sector bodies such as rivers trusts, wildlife trusts, and regeneration organizations. The predominance of these kinds of organizations in catchment management in England is significant. They appear to fit well with the current

national coalition government's political agenda of "localism" and reduced public expenditure, and were also perceived by Defra officials to be better placed for hosting collaborative initiatives compared to public-sector agencies or private corporations.

Interviews were conducted between September and December 2012 using a guide composed of 21 questions related to 5 aspects of collaboration, as represented in the conceptual/analytical framework. Interview recordings were independently transcribed, and data were sorted in order to relate responses to pertinent aspects of the framework. Next, descriptive labels (e.g., "Rural/Structuring/Informal Steering Group/Established Network") were applied to data in each of the five categories to identify significant features and variables. Thus, a qualitatively interpreted data set was generated for each of the 22 catchment initiatives in the sample. Finally, labeled data pertaining to each catchment-specific set were integrated to produce five thematic sets (context, problem-setting, direction-setting, structuring, and outputs and outcomes). This allowed individual initiatives to be compared and basic numerical data to be generated. The research was conducted on the basis of fully informed prior consent, and anonymity was assured for all participants.

## Framing and Developing Collaborative Catchment Management

In this section, details of the main research findings as they relate to the five aspects of collaboration represented in Figure 1 are presented.

### *Contextual Conditions*

Funding was identified by all of the interviewees as a very significant factor that had influenced their organization's decision to host a catchment-based initiative. Interviewees representing voluntary-sector host organizations identified a lack of access to sustained core funding as a perpetual problem. The example given next is indicative of the comments made:

> We have been working in the catchment for fifteen years and really what has determined more than anything what we have done has been what funding has been available. We're a registered charity, not a commercial organization. (Chairperson, River Trust, Rural Catchment)

The analysis indicated that cautious approaches toward the development of collaborative arrangements had been adopted by the hosts in 20 of 22 cases. Interviewees drew attention to the uncertainties regarding future government policy and funding, which they believed had made it very difficult to engage other organizations and groups in the new initiatives. In particular, concerns were expressed regarding the risk of damaging existing relationships with stakeholders if, after gaining their commitment and building expectations, national government did not provide sufficient additional funding or chose not to support the catchment-based approach in the future.

Local circumstances and the level of attention previously given to the catchment also appeared to influence the development of the collaborative initiatives. For example, four interviewees representing rural catchments and two representing inner-city urban catchments believed their areas had been overlooked by resource management agencies. For them, acting as hosts provided opportunities to draw attention to local concerns that they perceived to have been neglected. For example,

one interviewee described the management of their catchment prior to CaBA as follows:

> This area is a mess and it falls in a huge black hole where there hasn't been much funding input or interest. The whole thing is fairly cut-off and we felt neglected in every sense of the word. (Engagement Officer, River Trust, Rural Catchment)

In addition, the interests and priorities of the host organizations were very significant in shaping the context and defining the scope of the catchment-based approach within their areas. With only two exceptions, the host organizations had been in existence for more than 5 years and had developed management programmes to address particular concerns related to, for example, wildlife, habitat improvement, public access, and fishing. Given the uncertainties regarding future policy and funding, it is not surprising that the hosts interpreted the catchment-based approach in ways that matched their own pre-existing aims and priorities, rather than adapting their organization and reorienting their programs to address a wider set of issues and to collaborate with new partners. For example, an interviewee representing a wildlife conservation organization stated:

> We manage a nature reserve and a mosaic of Sites of Special Scientific Interest (SSSI) within the catchment . . . so we do have some significant land holdings that are affected and could benefit if we can make improvements to water quality. (Director, Wildlife Trust, Mixed Rural/Urban Catchment)

As such, many of the host organizations framed and applied catchment-scale management according to their existing priority issues. In so doing, they sidestepped the wider and more challenging ambitions of integrated catchment management that had been previously outlined in the initial position statement produced by Defra (Department for Environment, Food and Rural Affairs 2011).

Nevertheless, two host organizations had made deliberate attempts to develop a whole-catchment philosophy and approach and not to impose a particular set of priorities or objectives at the outset of the process. One of the organizations had been specifically created in response to the launch of CaBA in 2011, while the other had received support and guidance from a national environmental nongovernmental organization (NGO) with extensive experience of collaborative resource management. These examples are significant, as they suggest it is possible to reduce the danger of collaborative catchment management being subsumed within ongoing initiatives, or manipulated to fit with pre-existing programs and priorities.

### *Problem-Setting*

When invited to describe the purpose and focus of their catchment management initiative, all of the interviewees began by referring to problems related to poor water quality, such as loss of biodiversity and wildlife habitat, and resulting failures to meet standards established through the European Union (EU) Water Framework Directive process. A typical comment was as follows:

> It is a small river that is very heavily modified and trashed, basically. There is a long history of people trying to improve things and the Environment

Agency, under their WFD work, have a keen eye on it because it is failing in virtually every respect. The core purpose is to achieve improvements under the WFD. (Coordinator, Wildlife Trust, Rural Catchment)

As such, problems were often defined narrowly in relation to matters of environmental quality, rather than in terms of the ecosystem functions of the catchment system or human uses of resources. However, 12 of the 22 interviewees also felt that management arrangements and changes in policy were also significant parts of the overall problem within their catchment, as illustrated in the following examples:

In the past there have been lots of disparate initiatives and little groups in outlying areas, but none of it has ever come together. (Engagement Officer, River Trust, Rural Catchment)

With the WFD, there is now a move more towards water quality issues and whilst these don't necessarily conflict with biodiversity conservation, we needed to make sure that biodiversity is part of the discussion and then becomes part of the catchment plan. (Coordinator, Wildlife Trust, Urban Catchment)

Interviewees also drew attention to a wide range of other concerns regarding the management of their catchment, including inadequate data and misrepresentation of local-scale problems in river basin plans, failures to fully implement previous agreements and strategies, top-down decision making and limited opportunity for community participation, and lack of attention to the impacts of land use on the water environment. In one particular case, an interviewee explained that the local authority she or he represented had decided not to pursue a catchment-based initiative, even though it was offered funding. The authority was concerned about a particular section of degraded river, and had concluded that a catchment-scale collaborative response was not needed. This example illustrates how adoption and implementation of a new catchment initiative can be inhibited due to a poor "fit" with existing priorities and arrangements.

### Direction-Setting

The analysis revealed four distinct approaches used to establish direction and set objectives for catchment management. First, two interviewees believed that problems within their catchment were clear and well understood, and consequently there had been no need for additional data collection, appraisal, or planning, as illustrated next:

Certainly everybody agrees that invasive species are the number one concern and that is where we have focused our work. (Project Officer, River Trust, Rural Catchment)

Second, in 14 cases, interviewees felt that adequate evidence was available, but scattered among numerous documents produced by different organizations. For them, direction-setting involved gathering existing information to produce a single reappraisal of the catchment, as described by an interviewee:

We pulled all the existing plans together and took them to different groups of people to ask if the aims and actions were still valid. Nearly

all the issues were, but new ones were added as well. (Manager, River Trust, Rural Catchment)

Third, in four cases, the hosts had undertaken completely new reappraisals of conditions because they considered available data to be unreliable and understanding of the catchment to be too weak to set aims and objectives. This had been done by the host organizations themselves, *prior to* engaging other groups in catchment planning and management. Although this could be seen as a limitation that could impose the hosts' preferences on the collaborative process, the participants argued that this was still valid and necessary. For example:

We did our own catchment appraisals and detailed assessments including catchment walkovers with the Environment Agency. We felt it was really important to have a good understanding of the issues and priorities within the catchment before we started to attempt to do things and engage people. (Director, River Trust, Rural Catchment)

In a fourth approach, two host organizations had aimed to facilitate the direction-setting process by engaging relevant organizations and groups in collaborative planning, rather than determining the direction of catchment management themselves. The two interviewees believed that this strategy had encouraged deliberation and would strengthen future commitment. For example, one of the interviewees explained:

Our role is predominantly providing facilitation and coordination because in the past assessments and planning projects have been done on a piece-by-piece basis and there hasn't been one coordinated look at the whole river. It's very much about bringing all the information from landowners, parishes, and groups together to identify priorities that will result in an action plan. (Coordinator, River Trust, Rural Catchment)

These findings illustrate the diversity in perspectives and attitudes concerning knowledge production among the host organizations, and how their approaches to collaboration were subsequently influenced by the adopted frames. In the majority of cases, hosts had judged existing knowledge of the catchment to be adequate and uncontroversial, and were therefore content to present information as a ''given'' or to encourage the sharing of current information among the participants. However, some did acknowledge uncertainties. Some believed it was their responsibility to improve knowledge in order to prepare the ground for collaboration, whereas others believed that is was more beneficial if knowledge was co-produced as an integral part of the collaborative process.

### Structuring

All 22 interviewees regarded collaboration to be essential for successful catchment management. The example given next is typical of the comments made:

We can't do things in this catchment without collaborating with others. It is just the nature of land ownership, the regulatory framework and the range of stakeholders who have an interest in the rivers. For many of us, we don't have the ability to just decide and deliver . . . we need to talk

to and convince people and to secure resources. (Chairperson, River Trust, Mixed Rural/Urban Catchment)

In all of the cases examined, informal arrangements rather than formal procedures had been created for collective decision making. Eleven of the interviewees felt that this was simply due to the infancy and experimental nature of the initiative, and believed that formal arrangements might be developed later if CaBA became a success. However, an equal number of interviewees doubted whether formal structures would ever be viable due to the voluntary nature of CaBA and absence of a legal requirement to collaborate. At the time of the research, hosts had established ad hoc steering groups as mechanisms for coordination and decision making, and the steering groups included representatives for organizations and groups that were already part of their actor networks. As one interviewee explained:

We contacted all of our existing partners that we knew were managing land or had influence on the catchment... the usual players really. (Manager, Wildlife Trust, Mixed Rural/Urban Catchment)

Views varied a great deal regarding the representativeness of steering groups. Some interviewees argued that all the relevant actors were included, whereas others recognized that not all of the key interests within the catchment area were present. Nevertheless, all of the steering groups were reported to be functioning and carrying out useful activities, including mapping and coordinating separate projects and using networks to raise awareness for catchment management. However, in one particular case, the interviewee reported that the involvement of a regulatory organization with responsibilities for river basin planning had created tensions within the multiparty steering group:

We are the hosts and organize the meetings and set the agenda. We do it very much talking to the catchment coordinator within the Environment Agency. So we are very central to the process, but if the EA wants something on the agenda, it goes on the agenda. Some groups are anxious about putting things on the agenda because they know it is contentious and that the Agency will be there. (Coordinator, River Trust, Rural Catchment)

These findings indicate that host organizations played key roles in both interpreting and implementing collaboration. Working arrangements were characterized by informality and a focus on practical delivery of actions via the hosts' established networks of actors, rather than broad representation of interests and consideration of alternative understandings, values, and beliefs in decision making. The host organizations exerted a strong influence over the design and operation of collaboration, but there is also some evidence suggesting that multiparty dialogue and the prioritization of issues may have been adversely affected in some cases by presence of powerful agencies.

## Outputs and Outcomes

The analysis showed that hosts had developed collaborative arrangements from a number of very different organizational perspectives and starting points that reflected their own history, priorities, attitudes and relationships. Nevertheless, when invited to

define "measures of success," interviewees typically referred to outcomes such as improvements in water quality but also recognized the importance of achieving collaborative outputs that could eventually lead to positive environmental outcomes. The desired or anticipated outputs identified by the interviewees reflected the particular circumstances that had defined the starting-point for their collaborative initiative. Alternative starting points and different trajectories of collaboration are illustrated by the following two examples:

> For us, "success" is getting a strong consensus about the key issues, agreement on the general sorts of actions that are required, and demonstrating that we speak on behalf of a relatively large number of the local population who want the river to improve. (Project Officer, Wildlife Trust, Urban Catchment)

> We have tried to get a group of people together which is reasonably balanced around the table with interests and skills that represent how we see the problems. That's been quite successful . . . but we haven't finished any projects yet so to that extent we still have not got anything concrete to show for our efforts. (Director, River Trust, Rural Catchment)

Views varied regarding the importance of a catchment plan as one of the key outputs of collaboration. Two interviewees believed that plans were not needed at all for their catchment because the key issues and problems were already clear, and that priority should therefore be given to implementation of on-the-ground actions. The remaining 20 interviewees believed that catchment management plans could be a useful tool. However, 10 expressed concerns that planning may not interest some key catchment stakeholders and that voluntary plans may have negligible impacts due to weak links with the river basin planning and management process operated under the legal provisions of the EU Water Framework Directive. Typical comments included the following:

> We are dealing with organizations that have been involved in plan-making for many years and there is an element of consultation fatigue. So even just getting people around the table is a challenge because they are all busy and just think it is yet another plan that's intended to meet somebody else's requirements. (Project Officer, Wildlife Trust, Urban Catchment)

> We have been looking to the Agency for some support and guidance, but I don't think they have been that clear themselves. Their response has been "it's up to you to produce a catchment plan—we are here just to facilitate." But what's the point of us suggesting something if the Agency is just going to ignore it or won't allow us to do that? (Director, Wildlife Trust, Urban Catchment)

These findings illustrate the importance of the host organizations in shaping the context in which collaborative catchment management was developed. Host organizations understood and approached this task according to their own particular ideas, experiences, and beliefs regarding what was needed and the extent to which others should be involved in order to effectively manage and improve their catchments.

At the same time, the hosts did not have any direct control over other organizations and had to seek willing participants against a background of uncertainty regarding funding and government policy for catchment management. Consequently, the development of the individual collaborative management groups reflected the nature and power of interorganizational relationships in each catchment, in addition to the ambitions and particular characteristics of the hosts. The combination of these factors produced collaborative groups that were far narrower in terms of their scope, direction, and structure than had been suggested by Defra in the initial position statement for the catchment-based approach.

## Discussion and Conclusions

All multiparty groups operate in, and are influenced by, their particular contexts. For example, prevailing institutional arrangements, such as policies and guidelines, administrative structures, financial arrangements, and values and customs, set the context for collaboration and subsequently shape problem frames, directions, structures, and the definition of desired outputs and outcomes (McCann 1983; Gray 1985; Plummer and FitzGibbon 2004). Nevertheless, little is known about the ways in which organizations acting as leaders or hosts themselves work to define the context for collaboration and shape the subsequent development of the collaborative process, particularly when there is considerable leeway and government oversight and guidance are very limited.

These issues were examined in the context of experimental catchment management initiatives in England, hosted by organizations that received small amounts of public funding but were permitted to develop collaborative arrangements as they considered appropriate for local circumstances and conditions. The initiatives were in their early stages of development, and at the time of the study, national government had not provided a clear indication of future funding arrangements that might enable collaborative groups to continue after the experimental phase. Nevertheless, valuable insights regarding the influence of the host organizations on the interpretation and development of collaboration were gained. Key research findings are summarized in Table 1.

Within the sample, there were some strong similarities in the ways that hosts responded to the government's call and sought to work collaboratively with other organizations and groups. Although the amounts on offer were small, the hosts regarded the provision of public funding as an important symbol and indicator of government priorities that might imply more substantial support might be available in the future. Although this encouraged organizations to put themselves forward as hosts, the actual collaborative initiatives still tended to be constructed around their own pre-existing priorities and concerns. Consequently, hosts typically framed and presented collaborative catchment management to other interests as an approach for improving water and environmental quality, rather than a broader initiative aimed at improved coordination, integrated solutions, and delivering multiple benefits from whole-catchment systems. Because the chosen water and environmental issues were already familiar and important to the hosts, it is not surprising that they generally considered current knowledge to be uncontroversial and adequate for managing their catchments. Familiarity with the issues and knowledge meant that hosts tended to look to their existing actor networks to form collaborative groups, rather than to seek participation from a wider range of catchment interests. Because the initiatives were in their infancy, and were operating in an environment of policy

**Table 1.** Summary of key findings

| | Contextual conditions | Problem-setting | Direction-setting | Structuring | Outputs and outcomes |
|---|---|---|---|---|---|
| Similarities | Public funding seen as important resource and indicator of government priorities. Existing priorities of hosts significant in framing of catchment management | Initiatives primarily focused on water and environmental quality | Catchment knowledge often regarded by hosts as adequate and uncontroversial | Recognition of the importance of collaboration for managing catchments. Use of informal arrangements for decision making (steering groups). Reliance on existing actor networks. Limited attention to wide and balanced representation of catchment interests | Overall success defined in terms of improvements in water and environmental quality. Production of a catchment plan generally regarded as useful. Concern regarding limited potential impacts of catchment management due to weak links with river basin planning and management |
| Differences | Where areas previously overlooked by agencies, catchment management seen as | Variable recognition of underlying management and institutional | Wide variations in recognition of uncertainty and gaps in knowledge, | Diversity in collaborative activities and actions according to group focus and | Trajectories of collaboration varied due to differences in steering groups' starting points, |

| | | | | |
|---|---|---|---|---|
| opportunity to draw attention | problems affecting catchments | reflected in emphasis given to sharing of information, improving coordination, or new investigations Hosts shared power and responsibility for knowledge production to different degrees | perceived needs for managing the catchment | goals, and intended outputs |
| Exceptions | "Whole- catchment" philosophy adopted by new host organizations created explicitly for CaBA, and also those coached by more experienced organizations. | Catchment-scale management rejected where key problems tied to particular river sections or specific locations | Prioritization of issues and group dialogue adversely affected by participation of government agencies | Plan for managing the catchment considered not to be needed |

*373*

and financial uncertainty, hosts typically developed informal arrangements for decision making that involved a narrow range of actors and activities. This approach reduced the organizational risks faced by the hosts. Consequently, these factors combined to encourage the adoption of narrow approaches to collaborative catchment management that required little change on the part of the host and remained firmly focused on the delivery of water and environmental quality improvements. At the same time, hosts recognized the external institutional environment as a significant factor affecting the impacts of collaborative initiatives and considered stronger links between catchment and river basin planning to be necessary.

Although the findings point to the adoption and implementation of generally conservative approaches to collaboration, there were also some important differences. For a few host organizations, the fact that the catchment had previously received little attention from agencies provided an "opening" and enabled them to develop the collaborative arrangements they wanted without too much interference or competition. In some cases, there was recognition that institutional arrangements as well as environmental conditions in the catchment were problematic. Different attitudes toward knowledge and uncertainty were also apparent. Many of the hosts were content with their own existing data and information and saw collaboration simply as a means of conveying their knowledge to other organizations and groups. However, there were also instances where hosts recognized that information gaps existed and envisaged collaboration as a way of co-producing new catchment knowledge. There was also variation in the specific activities and actions undertaken by the collaborative groups, reflecting their different starting points, desired goals, and trajectories.

Although small in number, there were some interesting and notable exceptions in interpretations and approaches. In a few rare cases, catchment-scale management and planning were rejected altogether by the host. Conversely, there were instances where a recently established host, or a host that was "coached" by a more experienced organization, adopted a broader and more holistic "whole-of-the-catchment" philosophy and approach that emphasized collaboration.

Overall, these findings demonstrate that there is often a significant gap between the idealized narrative of collaboration and the actual experience and practice of collaboration. In reality, groups do not all follow the same path, and the collaborative process is shaped according to institutional, social and environmental conditions in the shared domain. Crucially, hosts are not passive or neutral actors in the process, but actively set the context of collaboration according to their own interests and understandings of what "catchment management" actually means. These observations support the arguments previously put forward by Plummer and FitzGibbon (2004), and suggest that many different forms of co-management can emerge according to the extent to which power is shared, who is involved in the regime, and the ways in which institutional arrangements are operated.

Adopted framings of collaboration subsequently permeate the design and implementation of the preferred approach. The findings suggest that funding arrangements, management priorities, actor networks, experience, strength of interorganizational relationships, attitudes toward knowledge and recognition of uncertainties, and willingness to share power, responsibilities, and risks with other participants are among the most important characteristics of host organizations that set the context and influence the framing and development of collaboration. Thus, voluntary-sector host organizations act as powerful entities in their own right, and their own priorities, values, attitudes, understandings, and relationships with other interests are reflected

in the collaborative groups and arrangements they create for catchment management. Furthermore, the host organizations are able to influence the sorts of improvements and public benefits that are pursued as a result of their ability to shape the structure and direction of their collaborative groups. However, it is recognized that while hosts occupy powerful positions of influence, they are not the only actors involved in collaboration. The power and involvement of other participants and potential hosts, who may have very different understandings and expectations of collaborative catchment management, is an area that deserves further research.

Although there was some evidence of innovation and adaptation, in general the findings support the theory of ''path dependency'' (Kirk et al. 2007). Hosts tended to act according to their own established practices, norms, and behaviors, rather than developing new collaborative working practices and relationships. This suggests that further institutional development will be needed if catchment systems in England are to be effectively, efficiently, and equitably managed via collaboration. To achieve the necessary changes, a new policy framework for collaborative catchment management should be developed that provides implementers with clear direction and yet sufficient discretion to tailor their approaches to fit circumstances and catchment conditions. It is suggested here that a ''principled approach'' to catchment policy could be adopted in England to strike a balance between these two equally important requirements and address the problem of path dependency, as has been done in some other countries (Watson 2004; Cook et al. 2013). Keeping in mind the organizational factors and constraints that have limited the development of collaborative catchment management in England to date, it is suggested that adopting a holistic systems-based perspective, including a diverse mix of actors and interests, valuing different forms and sources of knowledge, recognizing uncertainty, commitment to open dialogue, deliberation, and social learning, continual monitoring and evaluation, and iterative adaptation are among the most important principles that could guide the future development of collaborative catchment management.

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