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## Beyond Bureaucracy? Assessing Institutional Change in the Governance of Water in England

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**ABSTRACT:** Alternative governance approaches in which non-state actors play a substantial role in policy making and implementation are currently attracting attention. Government-centred water bureaucracies have to adapt to increased complexity. Relationships among state and non-state actors in the English water sector have markedly changed in the last few decades in connection with the privatisation of water services, reform of arrangements for flood management, and implementation of the European Union Water Framework Directive (WFD). The paper assesses whether such changes represent a shift 'beyond bureaucracy' and the beginning of a new era of multi-party 'water governance'. From an examination of institutional reform in river basin management and flood risk management, the paper concludes that the water bureaucracy has actually strengthened its control, despite using language emphasising partnerships and collaborative governance. Responsibility for policy implementation has been reallocated among a range of public, private and civic groups. This 'neo-bureaucratic' arrangement is problematic because the government-centred water bureaucracy has lost some of its accountability and legitimacy, while the newer collaborative arrangements have little real influence over the direction of water policy. Governance capacity needs to be enhanced by adopting a collaborative approach to development of water policy in addition to its implementation.

**KEYWORDS:** Bureaucracy, governance, institutional arrangements, co-delivery, England

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### INTRODUCTION

Prior to the 1980s, water management was generally viewed in most parts of the developed world as the responsibility and 'work' of formal government and its non-elected agencies. As a result, the vast majority of water management regimes had distinctly 'top-down', water-centric, and technocratic characteristics. Now, however, it appears that water is subject to far more complex and diverse institutional arrangements that include market and quasi-market systems, public-private partnerships, collaborative governance platforms as well as the vestiges of traditional government bureaucracy (Bakker, 2003). Most observers would concur that, in the last couple of decades, some sort of change has occurred in the water management sector and its associated institutions on a global scale. However, there is far less agreement on the nature, significance, and implications of the changes that have taken place. Recent institutional transformations are regarded by some as evidence of a fundamental shift from 'government' to 'governance' – both in the water sector and society more generally (Bekkers et al., 2007). For others, these same changes are little more than incremental adjustments in management roles and responsibilities designed to reduce some of the financial, regulatory, and operational burdens

placed on governments and their agencies, while doing little, if anything, to alter asymmetrical power relations or enable genuine collaborative governance (Swyngedouw et al., 2002).

Institutional reforms introduced in England are of particular relevance to the water governance debate and warrant closer scrutiny than they have received to date. In less than 50 years, a whole series of shifts and turns both in terms of the policy objectives ('ends') and the institutional arrangements ('means') used to achieve them have occurred in the English water sector. This has included the creation and subsequent abandonment of regional-scale multifunctional water management authorities in the 1970s, the privatisation of water services in the late 1980s and, most recently, attempts to transform flood hazard management and river basin planning. The purpose of this paper is to document and evaluate some of the key institutional changes that have occurred and to explore their future implications. The paper begins by outlining a theoretical perspective on institutional change which draws on literature from the fields of public administration, governance, inter-organisational relations and planning. This is followed by an analysis of broad-scale changes to water management in England since the Second World War, including key transition periods such as the late 1980s when political shifts brought about major changes in regulation and service provision. Attention is then turned to the specifics of river basin planning and flood hazard management, to shed light on the structures and processes of modern water governance that are beginning to emerge, and to assess whether this does actually amount to a shift 'beyond bureaucracy'. The paper concludes with some critical reflections on the current state of water management in England and the need to develop more flexible and locally based collaborative processes and mechanisms which enable water issues to be more widely debated and negotiated.

### THEORETICAL PERSPECTIVE

'Bureaucracy' was arguably *the* most important concept to shape the organisation of the public sector in the UK and many other parts of the world during the 20th century. During this period, the root causes of many socio-economic problems, including those related to water, were regarded by successive governments on both the left and right of the political spectrum as being organisational or institutional in nature. As such, organisational change was presented as an important part of the solution to a whole range of problems, including poverty, unemployment, housing, health, education, sanitation and water supply which had previously fallen within the responsibilities of borough councils, corporations, and similar local-level institutions. That is not to say that efforts had not been made previously to address some of these problems, but bureaucracy was regarded by its advocates as a far superior organisational model which offered greater efficiency and reliability.

Drawing on the definition proposed by the organisational and social theorist Max Weber, Beetham (1996) identified four main features of bureaucracy. First, bureaucracy is characterised by *hierarchy* in which each official or organisational unit has a clearly defined competence and is answerable to a superior for its performance. Second, bureaucracy offers *continuity* within established career structures and rule-governed procedures. Third, bureaucracy operates according to *impersonality* so that work is conducted without arbitrariness or favouritism by adhering to established rules. Finally, bureaucracy is defined by *expertise* among officials who are selected according to merit, trained to perform their functions and positioned to control access to privileged knowledge. The early advocates of the bureaucratic approach regarded these four features as highly desirable and also attainable qualities which could be applied prescriptively to improve organisational performance. However, critics have argued that bureaucracy has fallen below expectations when put into practice. For example, Beetham (1996) suggested that strict adherence to rules can result in inflexibility, while hierarchy may discourage individual responsibility and initiative. Others have pointed towards the tendency for bureaucracies to become overly protective of their own organisational territories and areas of competence, while at the same time exhibiting a capacity to continually expand into new policy arenas. For example, Perkin (1989) described this process of escalation in the following terms:

What was new in the 20th century was a belief that most social problems, not just the obvious ones like sanitation and water supply, were the products of social organisation rather than individual inadequacy. Problems thus defined as institutional and societal rather than moral and individual cried out for collective, professional solutions rather than moral discipline and exhortation. And once the legislative and administrative treatment began, the process of professionalisation and feedback set it, by which the welfare professionals uncovered new problems which demanded further legislative and administrative solutions...

As such, it was not only the establishment of government bureaucracies that defined much of public policy in the last century but also the idea that professional and bureaucratic responses rather than political, personal, or cooperative solutions were necessary to deal with major societal problems. Furthermore, their professional status enabled bureaucrats to exert influence on political decision making while at the same time avoiding the need for public scrutiny and debate because of their exclusive claims on knowledge and expertise. A further criticism of bureaucracy concerns the lack of attention given to the external environment of both public and private organisations. As an organisational model, bureaucracy was founded on the assumption of a stable and certain operating environment in which discrete policy problems could be addressed rationally and objectively by neutral officials acting alone (Laffin, 1998). Trist (1980) referred to this as the 'disturbed-reactive' environment and described it as a situation in which numerous large-scale organisations from both the public and private sectors occupy the same field and react to one another as they all seek the same optimal locations. To function and survive in such conditions, organisations have to amass power, resources and expertise to compete and maintain their positions. Not surprisingly, competitive and technocratic bureaucracies emerged as the dominant organisational form in this type of environment. However, environmental conditions became increasingly complex, unstable and uncertain towards the end of the last century as more countries moved towards post-industrial economies and the effects of globalisation started to be felt. Trist (1983) labelled this new type of environment as a 'turbulent field' and described it in the following terms:

In such a field, large competing organisations, all acting independently, in many diverse directions, produce unanticipated and dissonant consequences in the environment which they share. These dissonances mount as the field becomes more densely occupied. The result is a kind of contextual commotion. This makes it seem as if 'the ground' was moving as well as the organizational figures. This is what is meant by turbulence.

While government bureaucracies were designed for the disturbed-reactive environment of the last century, they lack the sorts of response capabilities and qualities that organisations need to cope with the turbulent conditions that now exist. Bureaucracy was designed for functional specialisation whereas many present-day societal problems are framed in ways that transcend the conventional categories of economy, society and environment. The concept of sustainable development is particularly important in this regard. While many governments have adopted sustainability as a fundamental development principle and goal, they continue to rely on bureaucratic structures and processes for policy delivery. Additional concerns about the capacity of bureaucratic systems to cope with emerging conditions revolve round their dependency on professional expertise and objective evidence. Many of the major societal problems that attract public attention, including climate change, are characterised by uncertainty, contested knowledge and intense debate. In these sorts of situations, the limitations of expert knowledge are quickly exposed, and therefore 'professional expertise' itself does not carry the same sort of authority and legitimacy as it might have carried in the past. Overall, what this implies is that bureaucratic arrangements no longer match the prevailing operating environment of public policy. As a result, governments and their bureaucratic organisations have come under increasing pressure to adapt to the new environmental conditions, integrate new holistic framings of societal problems and to respond to the loss of public confidence in government and professional expertise (Birch, 1982; Pierre, 2000). At the same time, the significance of changes in the operating environment is not always entirely

appreciated, and bureaucracy is still regarded today by some as an appropriate organisational model for the delivery of public policy.

A popular argument in academic fields such as planning, governance and inter-organisational relations is that the increasing complexity, uncertainty and change in the environment of the last couple of decades have resulted in a period of institutional adaptation involving a shrinking of bureaucracy and the emergence of new styles of governance. Indeed, the term 'governance' is often used symbolically to refer to a new policy-centric regime involving complex networks of public and private actors engaged in collaborative policy making through open processes of dialogue, social learning and negotiation (Marsh and Rhodes, 1992; Kooiman, 1993; Meadowcroft, 1998; Rhodes, 2000; Hajer and Wagenaar, 2003; Klijn, 2008; Pahl-Wostl, 2008, 2009). Evidence of the emergence of these sorts of complex arrangements in a variety of different public policy arenas has fuelled a debate about the role of bureaucracy in modern society. According to Laffin (1998), two distinct schools of thought can be identified within the debate. Within the 'neo-bureaucratic' school, recent institutional reforms are seen as the product of politicians and policy makers who are imposing 'new public management' principles and practices across different policy arenas to improve efficiency and effectiveness. The resulting complex systems of committees, advisory boards, round tables and working parties etc. are assigned specific roles and responsibilities that are, nonetheless, authorised and controlled by bureaucratic masters to varying degrees. In contrast, the 'post-bureaucratic' school argues that a much more fundamental shift is underway that involves self-organising inter-organisational policy networks, which function collaboratively and with only very limited input or influence from formal government. According to this view, the organisation of public policy is becoming far more diverse, with private or non-profit organisations taking on policy making and implementation roles previously performed by local authorities or other public bodies. In this sort of governance arrangement, relationships between policy makers and service providers are more likely to be based on negotiation as equal partners, or quasi-market arrangements, rather than on conventional hierarchical control arrangements. Consequently, it is argued that the previously clearly defined vertical and lateral boundaries among elected politicians, appointed officials, public agencies and private or voluntary organisations have blurred with the diffusion of power within society.

## **BUREAUCRACY AND WATER IN ENGLAND**

The theoretical perspective outlined above provides a means for examining the fate of bureaucracies and their relations with non-state actors in a period when the environment has become more turbulent, and consequently water-related problems have become more difficult to resolve. In this section, these issues are examined in the context of river basin management and flood hazard management in England. The analysis is based on a mix of data sources and methods, including content analysis of government policy documents, grey literature and academic publications, observations at planning meetings, and interviews with water managers and representatives of organisations involved in key planning and management initiatives at the local, regional, and national levels. Interviews and observational research related to the implementation of the Water Framework Directive were undertaken between May 2007 and March 2009. The discussion of changes in the flood management policy is also informed by evidence gathered between 2006 and 2008 from focus groups and household surveys in communities at risk of flooding.

### **River basin management**

At the beginning of the 20th century, water management in England was an extremely localised and highly fragmented activity, often conducted by municipal councils or public corporations specifically established to provide water supplies and sewerage services for the local community. It has been estimated that more than 2,000 separate organisations had responsibilities for public water supplies

around that time. In addition, sewerage and sewage treatment remained a separate local authority function (Watson, 2005). What followed over the next several decades was a series of institutional changes and reorganisations designed to improve the effectiveness and efficiency of water management. Many of the changes involved the adoption of the river basin as the main spatial and organisational unit of management. At the same time, responsibilities for water management were gradually taken from localised political bodies and passed to newly created water bureaucracies, operating under the direct control of central (i.e. national) government and its civil service ministries and agencies. For example, in the 1930s the Ministry of Agriculture established a national system of Catchment Boards and Fisheries Boards which provided a platform for the development of more sophisticated arrangements for river basin management. Legislation passed in 1948 marked a major step towards multi-purpose river basin management, with the creation of 32 River Boards covering both England and Wales with responsibilities for land drainage, fisheries and navigation, while water supply remained in the hands of local authorities. The 1963 Water Resources Act brought about further institutional changes. The multi-purpose, river basin approach to water management was taken further with the creation of 29 River Authorities that, although not directly responsible for water supplies, did have powers related to water resources development, abstraction, and river basin planning. Once again, central government retained overall responsibility and control of water via the Ministry of Agriculture, Fisheries and Food (MAFF) which was responsible for land drainage, flood alleviation, and fisheries, and the Ministry of Housing and Local Government which had responsibilities for water supply, sewerage, planning, and development. Under these arrangements, the role of local authorities was further reduced as water supply responsibilities were passed to statutory agencies and private water companies.

Despite several reorganisations in a relatively short period of time, water continued to be a problem for central government as population pressure increased in urban areas and the 'clean' and 'dirty' aspects of river basin management continued to be handled by separate organisations. The response from government was the 1973 Water Act, which set out to revolutionise water management in England as well as Wales by establishing ten regional-scale, river-basin-based, multifunctional authorities with responsibilities for water conservation, supply, sewerage and sewage treatment, pollution control, flood alleviation, land drainage, recreation, fisheries, and navigation (Parker and Sewell, 1988; Pitkethly, 1990). In addition, this particular reorganisation brought about the complete removal of water management as a local government function while strengthening the control of central government via MAFF and the Department of the Environment.

### *Water privatisation*

In the economic and political turmoil of the 1980s, the water sector was identified by the Conservative-led government as a promising candidate for privatisation. In addition to the selling-off of the water supply and sewerage functions to private water companies, other significant changes were introduced during this period, such as the elimination of the requirement for local authority representation on the Boards of Water Authorities, the closure of their meetings to the public, reduction in staff numbers, and the introduction of performance indicators and business management principles. While privatisation was an attempt to reduce government involvement in water, it quickly became clear that there was a substantial regulatory role to be fulfilled which would actually require the establishment of new public-sector organisations. Currently, the Department for Environment, Food and Rural Affairs (DEFRA) has overall responsibility for public policy on water in England, including Public Service Agreements for water protection, water supply, consumer charges, and the management of surface water. DEFRA is accountable to the Secretary of State for the Environment, Food and Rural Affairs. For both England and Wales, the use of the water environment is regulated by the Environment Agency (EA) which is a non-departmental public body that operates in eight regions. Its responsibilities range from the regulation of pollution to water abstraction licensing and operating flood warning and defence systems. In

addition, the quality of public water supplies in England is monitored by the Drinking Water Inspectorate, which reports to the Secretary of State for the Environment, Food and Rural Affairs. Finally, the economic regulation of the private companies providing water supply and waste water services is carried out by the Office of Water Services (OfWAT), which determines price limits for customers. OfWAT is independent of government but is accountable to the English Parliament.

What this historical account shows is that through a series of reorganisations and shifts in the institutional arrangements, central government has actually increased rather than reduced its control of water policy through the use of bureaucratic structures. While responsibilities for the delivery of water services have been passed to the private sector, the setting of broad policy and the regulation of the water environment involve numerous 'niche organisations' either acting semi-autonomously or directly under central government control. Furthermore, these organisations exhibit many of the classic characteristics of bureaucracy, such as a concentration of technical expertise, hierarchical structures, and close ties to central government rather than accountability via local government channels. At the same time, the emphasis placed on the regulation of water services and consumer prices, the monitoring and auditing of performance in both the public and private arms of the water sector, and the creation of management boards for each of the regulatory organisations suggests that there has been some movement towards the establishment of a water neo-bureaucracy in England in recent years.

### *Implementing the Water Framework Directive*

The EU Water Framework Directive (WFD) represents a new vision and approach for the management of water resources that seeks to protect and restore the ecological and physical functions of water bodies as well as their overall quality. Early EU water legislation focussed primarily on single issues such as drinking water, bathing beaches, and groundwater protection and relied heavily upon command and control mechanisms for the achievement of water-quality standards. The WFD is designed to integrate these earlier initiatives within a 'holistic' river basin management approach and, at the same time, enable more ambitious environmental objectives to be reached by using a broader mix of voluntary, economic and regulatory instruments. Furthermore, Article 14 of the WFD calls for publicly available information about the status of water as well as consultation and public engagement in the process of identifying and implementing appropriate actions (Moss, 2003). The WFD undoubtedly represents a reformist agenda aimed at changing the principles, priorities and time-scales of water governance across the EU. Effective implementation of the WFD represents an enormous institutional challenge that requires multi-party collaboration and integration of decision making for land and water at different spatial scales. Therefore, a degree of adjustment or even transformation should be anticipated in the bureaucratic and neo-bureaucratic institutional arrangements which have dominated water management in England for many years. By examining the process of WFD implementation 'on-the-ground' it is possible to get some insight into the actual extent of institutional change that has taken place to date.

In England, responsibility for the implementation of the WFD rests with the EA. As the designated sole 'competent authority' for the implementation process, the EA is responsible for the development of River Basin Management Plans, which were made publicly available for all of the ten river basin districts wholly or partly in England in December 2008. The EA faced a difficult challenge in adapting to this new planning role as it has a strong water-centric (rather than river basin) organisational culture, while environmental regulation remained as its primary function within the water governance system. The requirements of the WFD, particularly the joint consideration of land and water, the need to work collaboratively with other organisations and the demands for public participation, necessitated a different style of operation from the EA. In practice, however, the EA has interpreted these requirements in a way that secures and arguably enhances its steering capabilities by incorporating a range of other organisations as 'co-deliverers' within the process. For example, due to the focus on the

river basin district, the development of the management plans has been based on limited regional-scale partnership arrangements with very little input from local-scale water actors such as municipalities or environmental action groups. Furthermore, only organisations with the potential to directly assist the EA with the implementation of management measures have been actively engaged, while others with legitimate interests or stakes but potentially different water management agendas have been kept at arm's length. This is demonstrated by the composition of the Regional Liaison Panels established by the EA to assist with the preparation and implementation of the plans. In the North West for instance, the Panel includes representatives from British Waterways, the Consumer Council for Water, the National Farmers Union, a chemical company, a local authority, the Mersey Basin Campaign, a National Park authority, Natural England, the Royal Society for the Protection of Birds (RSPB), the North West Association of Rivers Trusts, the Regional Development Agency, a water company, and the North West Regional Assembly. The Panel is chaired by a staff member of the EA. Members of the public are only allowed to attend Panel meetings as observers by prior appointment with the chairperson. Interviews conducted with members of this Panel revealed that meetings often involved very limited debate or conflict, and were often used to 'inform' the so-called 'co-deliverers' of the latest policy choices made separately by the EA head office or the UK Technical Advisory Group (UKTAG) for the WFD, which comprises of experts from a range of conservation and environmental management agencies. For example, one member of the Liaison Panel described the EA's strategy as follows:

... we are there as advisers. The first year of meetings I went to, if I heard 'competent authority' once, now I hear it three or four times in a meeting, which is a kind of a ground rule saying "we are the decision maker here but thanks for your advice". So, I don't think there have been many debates where they had to get consensus... You do not feel part of it. It [the Liaison Panel] is not built as a decision-making body in any way, shape or form.

Referring to the UKTAG, another interviewee stated: "... the UKTAG is one in particular. UKTAG, we have had a lot of problems with this. They are a very, very closed shop. It has been very, very difficult for us to participate in it".

This limited approach to sharing decision making, collaboration, and public participation is also reflected in the terminology used by the EA, which refers to its partner organisations in the river basin planning process as 'co-deliverers'. In other words, organisations have been specifically selected by the EA because of their capacity to implement measures but have not been treated as genuine partners in a process of co-decision making. Potential areas of conflict and differences in values have not been thoroughly acknowledged or addressed in this process because such debates were considered by EA officials to be counterproductive to the effective and timely delivery of WFD requirements. Many of these so-called 'co-delivery organisations' have refused to formally endorse the draft plans of river basin management because they had little influence over their contents and want to be able to voice objections if necessary later on in the planning and implementation process.

This predominantly top-down, bureaucratic and EA-centred approach to planning and management is also reflected in the data used to characterise the status of river basins in England, and their subsequent use for public consultation at the catchment scale. To ensure a standardised and coordinated approach, the EA opted to undertake the river basin characterisation exercise (a key requirement of the WFD) at the national level, using its own internal data and technical expertise. This was despite the fact that research institutes such as the Centre for Ecology and Hydrology hold more detailed information, which could have been used to characterise the condition of several key catchment areas. A combination of poor data and use of very large-scale (regional) River Basin Districts as the principal planning units have resulted in low-resolution outputs in the form of maps designed to indicate the current status of surface water and groundwater and the risks for water quality objectives not being reached in the future. These maps were used by the EA in a series of public workshops on individual catchment areas in 2008. The workshops followed a predetermined format designed by the EA to integrate knowledge about the various catchments as well as to gain commitment from local

groups for the implementation of measures. Even though this provided some limited opportunities for local issues to be addressed, it nevertheless marks an overwhelmingly bureaucratic strategy for enhancing the steering capacity of a centrally coordinated public water management agency.

Although, in principle, the WFD encourages an integrated catchment management approach, links with other planning processes have so far been weak. In contrast to a number of other member states, the local municipalities are not included in the designation of competent authorities for the WFD in England, and consequently local interest in, and commitment to, the plans have been low to date. Furthermore, all local municipalities in a particular river basin district are typically represented by just one person on the Regional Liaison Panel. This is a further demonstration of a water-centric and top-down approach to implementation and adds strength to the argument that the water bureaucracy has effectively assimilated the WFD into its existing structures, processes, and practices. As such, a transformation in river basin planning and management in England as a result of the WFD appears to be a very distant and weak prospect at the moment.

This analysis of river basin management shows that there have been distinct periods of institutional change during the last 80 years. From the 1930s to the 1980s, reforms focussed on the gradual establishment of multifunctional water bureaucracies that were organised at the river-basin scale. While the WFD represents a broad and ambitious agenda for the reform of water management, to date, it has produced a very modest set of institutional adjustments in England. River basin planning and management is still very much a top-down, bureaucratic, and agency-centred process and there is little to indicate that a shift to a more collaborative, multi-party style of decision making and water governance is likely in the foreseeable future.

### **Flood hazard management**

The risks and impacts of inland flooding in England are relatively modest in comparison to many other parts of the developed world. Nevertheless, flooding continues to command a great deal of public and political attention. Paradoxically, flood management itself is increasingly detached from local-government decision making and influence, due to its oversight by ministers of national government. Water privatisation in the late 1980s led to the establishment of additional bureaucratic arrangements and organisations, which attempted to apply new public management principles. Out of this an institutional system has evolved that involves central government, executive agencies and local authorities. The institutional system has not, however, remained stable in the course of the last 60 years. Roles and responsibilities have shifted significantly in response to changes in the national flood management policy, which itself has come under increasing influence from the European Union. According to Johnson et al. (2005), there have been three major phases of flood management policy in England, triggered in part in response to the major flood events in 1947, 1953, 1998, and 2000. An additional institutional reorientation has also occurred in response to the surface-water flooding suffered in 2007 (DEFRA, 2008). At the same time, shifts in policy have also been shaped by broader changes in socio-economic conditions, political priorities, and attitudes towards the environment. The three major policy phases are referred to below as 'local land drainage', 'flood defence bureaucracy' and 'devolved flood-risk management'.

#### *Local land drainage*

From the late 1940s until the 1980s, the drainage of agricultural land for improving production was the major focus of the flood management policy. More than half of the 11 million hectares of agricultural land in England have been estimated to be dependent on field drainage. By the mid-1970s, approximately 100,000 additional hectares of land were being drained each year – an increase of around 12% per annum (Parker and Penning-Rowell, 1980). During this period, the land drainage and flood protection system was essentially local in nature and heavily influenced by farming interests on the various Land Drainage Committees. Nevertheless, central government (in the form of the Ministry



of Agriculture, Fisheries and Food) did have one crucial role in providing grant aid for land drainage and flood defence on a scheme-by-scheme basis using cost-benefit techniques. While the protection of the urban environment from flooding was addressed through the 1947 Town and Country Planning Act, the Water Authorities had little influence over the development and land-use planning system, which was a zealously guarded local authority function (Tunstall et al., 2004). This ineffective system of development control resulted in many inappropriate housing developments in various parts of England. Without doubt, the resulting increase in urban flood risk contributed to a shift to a second phase in the flood management policy.

### *Flood defence bureaucracy*

From the mid-1970s to the late 1990s, both the substantive focus of the flood management policy and the institutional arrangements for the delivery of policy changed quite markedly. In an era of both farm surpluses and increasing public environmental consciousness, attention turned to the defence of urban areas from flood risk, using classic structural engineering schemes to either store flood water or more commonly to speed its flow by straightening river channels. While the original emphasis on government grant-aid and cost-benefit analysis of scheme proposals remained in place, this second phase was marked by attempts to adopt a more coordinated and unified approach amongst local authorities in the same flood-risk areas. In particular, the Regional Water Authorities were given the role of supervising the local authorities, many of which had neglected the maintenance of watercourses due to confusion over responsibilities and a system of central government grant aid which had not increased since the 1960s, despite high levels of inflation. In some cases, Regional Water Authorities adopted a more proactive approach to control flood defence, which involved the reclassification of some local watercourses as 'main rivers'. As a result, longer lengths of rivers could be engineered and directly regulated by the Water Authorities, without the need to rely on the cooperation and finances of the local authorities. In effect, this period gave rise to a new flood management bureaucracy for England that included central government and the multifunctional, regional-scale Water Authorities. Central government was able to 'steer' the process of flood defence through the use of cost-benefit techniques and the provision of grant aid. The Water Authorities were able to freely deploy their engineering and hydrological expertise within this framework; however, local authorities were increasingly marginalised, despite their potentially very valuable role in shaping the development of flood plains via the land-use planning system.

### *Devolved flood-risk management*

By the 1990s, both public and professional confidence in the well-established approach of river engineering for flood defence was being eroded and the beginnings of a new management paradigm could be discerned. Extensive flooding across parts of England in 1998 and again in 2000 forcefully demonstrated the limitations of a strategy focussed largely on structural defence, and accelerated the need to develop a more sophisticated and comprehensive set of measures (Tunstall et al., 2004). This shift in thinking did not indicate a complete end to the river engineering approach, but signalled wider acceptance of the need to actively manage the whole flood-risk cycle and to use a broader range of instruments to deliver policy, including spatial planning to target future development and flood warning technologies. In effect, the management of flood events had become the management of flood risk, an idea reflected well within the *Making Space for Water* document, which sets out the central government strategy on the management of flood risk (DEFRA, 2005) and also the EA's own strategy, which similarly proposes a risk-based approach to flood management (EA, 2009). Both documents make it clear that the costs of implementing this new approach cannot be met by central government alone and that individuals and the private sector will be required to take on more responsibilities and be prepared to accept some of the associated financial costs, which are expected to rise by approximately 80% to £1040 million per year by 2035 (ibid).

These recent policy announcements might suggest an intention on the part of central government and its executive agencies to take a stronger interest and a more prominent role in the management of flood risk. In practice, they show that the role of central government is being redefined as one of 'high-level steering'. The EA, meanwhile, is concentrating its expertise and technical resources on flood-risk mapping and warning and ensuring existing standards of protection are maintained, rather than on providing higher levels of protection through new and existing schemes (EA, 2009). The EA has also been granted statutory supervisory powers over all sources of flooding, following an independent review of major floods in the summer of 2007 (Pitt, 2008). Again, what this suggests is that the water bureaucracy is extending its steering influence, whilst also distancing itself from the delivery of policy implementation and action. Consequently, the burden of responsibility for flood prevention is being shifted to private developers and, more fundamentally, to local authorities, who are in effect being re-engaged, after having been largely excluded in the 1980s and 1990s. A key example of this shift is the statutory guidance for development on the flood plain issued to Local Planning Authorities (LPAs) (DCLG, 2006). Under this guidance, LPAs are required to consult with the EA on the assessment of flood risk at any site proposed for development. They are also required to take a sequential approach to development, by seeking to use as a first priority those sites where flood risk is lowest. Clearly, this still leaves local planning officials and elected representatives with the difficult task of reconciling competing pressures for housing and economic regeneration with the management of flood risk (Tunstall et al., 2009).

This analysis not only identifies some of the key changes in the flood management policy of the last few decades but also shows how power has shifted between the local and national scales as roles and responsibilities have been redefined over time. Starting from a position of highly fragmented and local-scale control, land drainage and flood defence were gradually brought under the influence of central government through its grant-aiding powers. Between the mid-1970s and the late 1980s, bureaucratic organisations, such as the Water Authorities and later the EA, became increasingly involved in both the development and implementation of policy, which placed a strong emphasis on river regulation and the building of structures to defend urban areas against flooding. Once again, central government was able to maintain an overseeing role via the grant-aid system and cost-benefit rules, while links to land-use planning and politics at the local level were weakened. From the late 1990s onwards, a water bureaucracy comprising central government and its executive agencies has sought not only to change the overall direction of policy towards the management of risk throughout the flood cycle but also to distance itself from policy delivery ('rowing') while at the same time taking tighter control of policy making, or 'steering'.

## CONCLUSIONS AND IMPLICATIONS

There can be little doubt that the bureaucratic model of decision making had a major influence on the ideology and organisation of water management in England throughout most of the last century. There is certainly clear evidence of central government adopting an increasingly bureaucratic approach to the management of river basins and floods characterised by hierarchical, state-centred, water-centric, and expert-based decision-making arrangements. This led to the creation of successive sets of specialist multifunctional water management organisations acting under the direct control of civil servants and government ministers at the national level. As a result, water management issues became far less of a concern for local authorities and did not receive the attention they deserved within the land-use planning system, which exacerbated problems such as flooding, drought and pollution. In addition, water-related problems were distanced from the local arenas of political and public debate and were effectively redefined as purely technical matters to be handled by experts in specialised agencies. Towards the end of the 20th century, these bureaucratic institutional arrangements came under increasing pressure to adapt, as more complex and intractable problems started to emerge against a background of increasing turbulence and uncertainty. Added to this, the sustainable development

agenda emphasised the need for more integrated and participatory approaches to water, environment and development problems.

These sorts of pressures and conditions have undoubtedly resulted in some important changes in the water management policy and institutional arrangements in the last couple of decades. The argument that this new type of operating environment demands a different approach to policy making and implementation, based on a collaborative governance model, is compelling. Nevertheless, the extent to which a shift to a new 'post-bureaucratic' approach has actually happened in practice is an altogether different matter.

In the case of river basin management, the WFD has been 'accommodated' within the norms and existing practices of the EA, which has positioned itself as the sole competent authority for implementing the legislative and policy requirements. This has enabled the EA to adopt a business-as-usual bureaucratic approach, taking direction from central government, relying on its own national data sets and internal expertise, and limiting debate and engagement by focussing planning efforts on the regional (river-basin district) scale. Furthermore, the organisations that have participated in the planning process have done so as 'co-deliverers' rather than 'co-deciders' of policy. This amounts to little more than a traditional consultation process, despite the rhetoric of collaboration and partnership working used by the EA. In the case of flood management, clearly, there have been some very significant shifts in policy in recent years, which signal a move towards a more holistic and integrated risk-based approach. In essence, the focus is shifting from a concentration on flood defence toward the building of greater flood resilience, with this change being evidenced in part by the EA's funding of more diverse approaches to flood prevention, warning and response. At the same time, roles are being redefined, with central government and the EA maintaining control over the policy-setting process but seeking to distance themselves from the responsibilities and costs of policy implementation and action on-the-ground.

Overall, this indicates that a modestly reformed bureaucracy continues to be a fundamental element of the institutional approach for water management in England. While it is true that more non-state actors are now engaged in aspects of water management, they have tended to be assigned to the job of 'rowing' within the reformed governance arrangements, while the task of 'steering' remains firmly in the hands of powerful government departments and technically oriented public agencies. In both the case of river basin management and flood management, non-state actors and local authorities have been given substantial roles in the implementation of management measures within carefully orchestrated policy frameworks that maintain rather than reform the underlying bureaucratic structures and power relations. This middle-ground or 'neo-bureaucratic' approach is problematic for a number of reasons. First, it effectively reduces public accountability because central government is able to deflect the blame when things go wrong towards the numerous other actors that are involved in policy implementation, rather than to the state actors that are responsible for policy making. Second, it denies those involved in implementation the flexibility to address local circumstances and needs as policy itself continues to be set by the bureaucratic structures and processes of the EA and central government. Third, there is a clear democratic deficit in the sense that those who are being given more responsibility for implementing river basin management and flood-risk policies have little influence over the direction or content of those same policies.

The current institutional system for water management in England is still predominantly bureaucratic and provides limited accountability, flexibility, and democratic control. It is a poor match for a water management environment characterised by increasing complexity, uncertainty, change and controversy, and it seems clear that a different 'post-bureaucratic' approach is required to cope with these sorts of conditions. To develop a more responsive and collaborative system of water governance, a number of institutional reforms are required. Fundamentally, there needs to be greater recognition of the need to integrate the management of land and water at the local scale and to develop appropriate institutional arrangements for both policy making and policy implementation. It is an obvious point, but many water resources problems result from activities on land, and therefore a policy process that

focuses solely on the water environment cannot possibly be effective. While the catchment scale is most appropriate from a water management perspective, it has to be recognised that this is rarely the case for land-based interests. At the same time, the current regional approach adopted for river basin planning and management is too far removed and distant from local actors and issues to be able to provide the kind of integrated approach that is needed. As such, effective governance will require the development of processes and mechanisms for interaction, communication and negotiation across the different organisational and spatial boundaries, but centred on catchment systems. This kind of integrated and collaborative approach cannot happen within the current top-down institutional structure, in which central government and its executive agencies maintain a strong grip on policy making while the role of other actors is limited to implementation. Policy making and implementation therefore need to be more closely linked through heterarchical (i.e. flat) institutional structures that enable a broader range of land and water actors to participate on an equal basis.

This kind of collaborative, multi-actor, and local catchment-scale approach cannot be achieved without a change in the thinking of central government and its executive agencies. The expertise and competence of other public, private, and civic actors would have to be more widely recognised and valued alongside those of professionals employed in organisations such as the EA. There would need to be recognition of the fact that co-delivery of the water management policy cannot be accomplished without co-decision making. Of course, it has to be acknowledged that these changes are not just managerial in nature and actually require organisations such as the EA to relinquish some of their authority and power and to reposition themselves as facilitating and enabling organisations, rather than as policy-steering bureaucracies. In following such an approach, management agencies need to engage with questions of whether, and to what extent, partnership approaches with 'non-experts' might challenge the previous ways by which legitimacy for management decisions was claimed. Local-level approaches, which engage a multitude of actors, undoubtedly bring a wide variety of viewpoints, values, and stakes into management procedures, and these may challenge the legitimacy of judgements and planning decisions made on the basis of governmental claims or scientific evidence. On the other hand, local-level mechanisms that involve a broader range of actors can provide valuable opportunities for the legitimisation of decisions and knowledge claims. While a local-level, collaborative approach is warranted in an environment characterised by complexity and turbulence, it nevertheless represents a radical departure from current norms and practices. As such, some strong visionary leadership will be required within the water bureaucracy in order to realise this new mode of water governance.

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