



Summer 1977

Evolution in the British Institutional Framework for Water Management

Derrick W. R. Sewell

Lorna R. Barr

Recommended Citation

Derrick W. Sewell & Lorna R. Barr, *Evolution in the British Institutional Framework for Water Management*, 17 Nat. Resources J. 395 (1977).

Available at: <https://digitalrepository.unm.edu/nrj/vol17/iss3/4>

This Article is brought to you for free and open access by the Law Journals at UNM Digital Repository. It has been accepted for inclusion in Natural Resources Journal by an authorized editor of UNM Digital Repository. For more information, please contact amywinter@unm.edu, lsloane@salud.unm.edu, sahrk@unm.edu.

EVOLUTION IN THE BRITISH INSTITUTIONAL FRAMEWORK FOR WATER MANAGEMENT

W. R. DERRICK SEWELL* and LORNA R. BARR**

Crisis often plays an important role in stimulating change in resources management institutions.¹ Sometimes it brings attention to problems which have been previously ignored, as is typically the case with floods or water pollution. Occasionally it also provides the popular support required for modifications of laws, policies, or administrative arrangements. Crisis, however, does not always result in change; it may merely produce an intensification of a previous approach. A flood, for example, may occasion no more than the provision of additional money for the relief of flood victims or the raising of dykes to a higher level. Similarly, a drought may only result in the construction of a larger volume of reservoir capacity rather than a shift to other approaches in urban water management.

The British drought in the summer of 1976 provides a valuable opportunity to observe the role of crisis in shaping water institutions. Faced with the most severe shortage of water ever recorded in their country, Britons were urged to "share a shower" or "bath with a friend." Legislation was passed to drastically reduce water consumption in the home and factory and on the farm. Social and economic losses were enormous. It has been estimated, for example, that the drought cost cereal farmers more than £250 million (\$400 million).² Many workers in water dependent industries were threatened with the prospect of unemployment. Some 80,000 window cleaners, for instance, spent several weeks praying for rain.³ The same is true of most of the Water Authorities. They sustained huge losses in revenues as a result of reductions in consumption. At the same time, they incurred additional costs through the installation of standpipes or through hiring tanker trailers to bring in supplies from areas which had surpluses. Overall, the drought is now estimated to have cost the water industry at least £35 million (\$56 million).⁴ The Yorkshire

*Professor of Geography, University of Victoria, Victoria, British Columbia, Canada.

**Lecturer in Geography, Monash University, Clayton, Victoria, Australia.

1. Hart, *Crisis, Community and Consent*, 22 L. & CONTEMP. PROB. 510; R. Kasperson, *Environmental Stress and the Municipal Political System*, in THE STRUCTURE OF POLITICAL GEOGRAPHY 481 (Kasperson and Minghi eds. 1969).

2. Daily Telegraph, July 13, 1976, at 15, col. 2.

3. Daily Telegraph, Aug. 28, 1976, at 12, col. 4.

4. WATER SUPPLY PROSPECTS FOR 1977 4, Nat'l Water Council, London (1977).

Water Authority has estimated that the drought cost them over £4.2 million (\$6.82 million) and this will necessitate a 10% increase in water rates in the coming year. In some other Authorities increases of up to 20% are now contemplated.⁵

The first reaction to the drought was a call for voluntary restrictions in consumption. As time passed, however, a more forceful approach was required. A Drought Act⁶ was passed, a Minister for Drought was appointed, and severe penalties were imposed for contravention of the drought regulations. Relief came when rain began to fall on the last weekend in August. In some areas the drought problem was replaced by one of floods.

Gradually, restrictions have been relaxed, and the government is now undertaking a thorough review of present water management institutions in England and Wales.⁷ The outcome will be of considerable interest not only to those affected by the drought but also to those concerned with institutional innovation in the resources field. Typically, it seems, new laws, policies, or administrative structures are introduced very slowly.⁸ Shifts in approach tend to be evolutionary rather than revolutionary.⁹ But the process by which change does take place is still not well understood. The important question here is, will the drought of 1976 result in any major alterations in British water institutions? Will it result, for example, in the establishment of a new administrative structure? Will existing agencies be given new responsibilities? Will there be any significant changes in water policies?

EVOLUTION OF THE PRESENT INSTITUTIONAL FRAMEWORK

The British institutional framework has its roots in antiquity.¹⁰ The major features of the present set-up, however, were established under the 1963 Water Resources Act,¹¹ and the 1973 Water Act.¹² The former was passed after a lengthy investigation of the water industry in England and Wales revealed some important weaknesses in existing institutions. It had become clear that the administrative structure and government policies needed to be radically altered. The

5. Daily Telegraph, Oct. 7, 1976, at 27, col. 4.

6. Drought Act, 1976, Eliz. 2, c. 44.

7. A separate water management framework has been set up in Scotland and there is also separate legislation.

8. D. BRAYBROOKE & C. LINDBLOM, *A STRATEGY OF DECISION* (1963).

9. *The Science of Muddling Through*, 19-20 PUB. AD. REV. 79-80 (1959-60).

10. K. SMITH, *WATER IN BRITAIN* (1972); D. HARTLEY, *WATER IN ENGLAND* (1964).

11. Water Resources Act, 1963, Eliz. 2, c. 38.

12. Water Act, 1973, Eliz. 2, c. 37.

Central Advisory Water Committee which was established in 1955 to review the situation, drew attention to the problems of growing water scarcity and declining water quality in the major urban and industrial areas, the inefficiencies resulting from the fragmentation of the industry into thousands of small units, and the weaknesses resulting from lack of co-ordination among agencies.¹³ It recommended a bold new approach involving consolidation of agencies, recognition of planning as a key element in water management, introduction of economic concepts into water policies, and the development of a national water policy. The 1963 Water Resources Act embodied most of these principles, and some important changes in the institutional framework resulted. Some, however, were more sweeping than others. The administrative structure altered very little, but functions performed by the main water agencies changed a great deal.

To provide a national perspective in water management, the Water Resources Act established a Water Resources Board. It was composed of eight members, appointed by the central government, and had a broad responsibility to provide the latter with advice, encourage and facilitate research and long range planning, and foster co-ordination among the major water management agencies. The Board, however, was the only really major innovation in the administrative structure. Twenty-nine River Authorities replaced thirty-four River Boards. Boundaries remained almost as they were before 1963 (Figure 1). Responsibilities for land drainage, pollution prevention, fisheries, and in some cases navigation were transferred from the River Boards to the River Authorities. The appointment of between twenty-one to thirty-one members to the River Authorities by central and local government, with the latter maintaining a majority, differed little from previous practice. Local authorities and private water companies retained their water supply and sewage disposal functions. The Ministry of Agriculture, Fisheries and Food remained responsible for fisheries and land drainage at the central government level. At the local level Internal Drainage Boards were also left intact (Figure 2).

Although changes in the administrative structure appeared marginal, the duties imposed on the River Authorities represented much more radical innovations in water management under the new legislation. River Authorities were required to expand hydrometric schemes for improving the collection of basic data; produce long range plans, termed Periodical Surveys, for assessing future supply and demand patterns; introduce charging schemes for financing water resource development; and license water abstractions (withdrawals).

13. Sub-Committee on the Growing Demand for Water, Final Report (J. Proudman, chairman 1972).

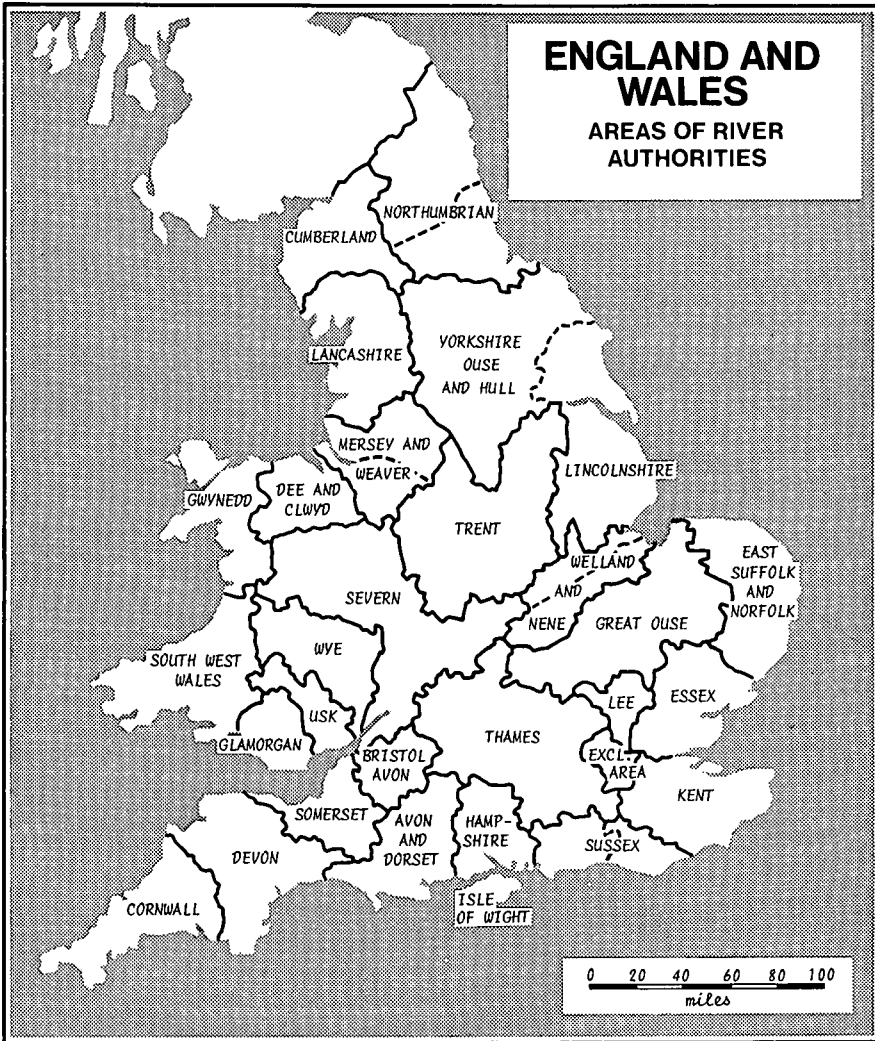


FIGURE 1

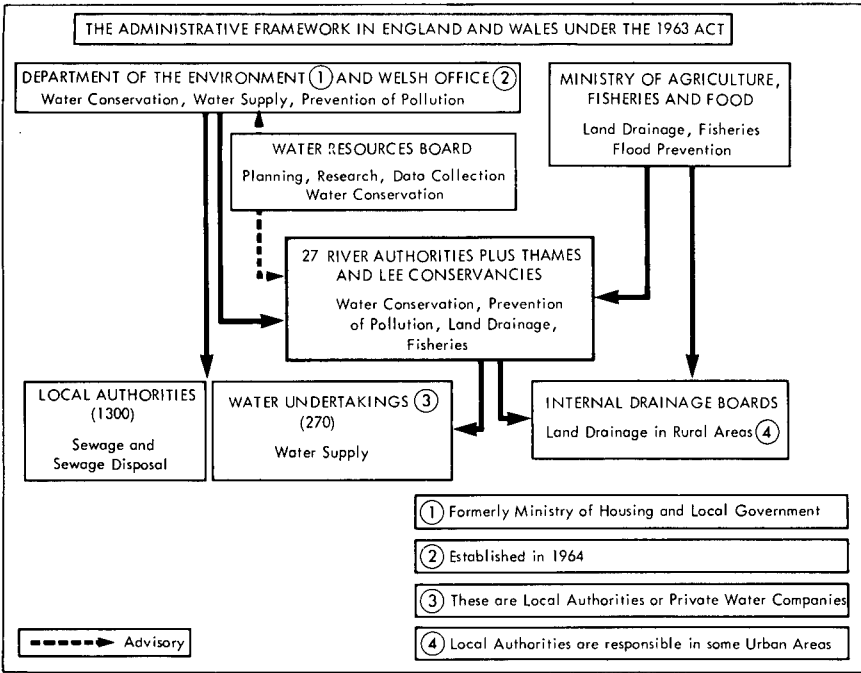


FIGURE 2

These changes indicated a basic shift in the emphasis in water management in England and Wales away from strictly single purpose, locally focused development, towards a more integrated approach in which the region and the longer time horizon were key foci in planning.

THE IMPETUS FOR REORGANIZATION

While the 1963 Water Resources Act was widely regarded as an important step in the evolution of water management in England and Wales,¹⁴ it was never regarded as a panacea.¹⁵ However, few could have predicted that pressure for major changes would have come so soon. Less than four years after the Act went into force in 1965, a number of important weaknesses had been detected.

Many of the administrative units were still too small to be economically efficient. In addition, unnecessary barriers to the integration of water surplus and water deficit areas resulted from the large number of River Authorities. Besides this there were problems

14. 681 Parl. Deb., H.C. (5th ser.) 903, 894, 900 (1963-63).

15. 244 Parl. Deb., H.L. (5th ser.) 1082-95 (1962-63).

of co-ordination, stemming from the separation of responsibilities for water supply and water quality management. A further deficiency related to the limitations experienced by the Water Resources Board in the drawing up of regional and national plans. One of the major options for dealing with water supply problems, for example, was that of improving water quality. Unfortunately this strategy was beyond its purview. At the regional and local levels the separation of water quality management between River Authorities and local authorities hampered the implementation of effective water quality management programs. This problem was further exacerbated by a failure in co-ordination between River Authorities and planning authorities for land use planning. New housing developments, for example, were permitted without providing the necessary treatment facilities first.

Recent surveys of water pollution in England and Wales have indicated that the magnitude of that problem may have been underestimated when the 1963 legislation was enacted. A Department of Environment survey, for example, undertaken in 1970¹⁶ showed that nearly 1200 miles of river in the main industrial areas of the country, notably southeast Lancashire, south Yorkshire, Tyneside, Teesside and parts of the Midlands remained grossly polluted. Although no new powers for controlling water pollution were introduced by the 1963 Act, River Authorities became responsible for enforcing the licensing and prosecution duties under the 1951 and 1961 Control of Pollution Acts.¹⁷ A report released by the Severn-Trent Authority last year¹⁸ suggests that many were negligent in this respect. Protected by a secrecy clause in the pollution control legislation, River Authorities tended to turn a blind eye to lawbreakers. Reviewing the situation, Tinker identified twelve companies which had been particularly flagrant in their abuse of the regulations. "In several instances the disregard of pollution law appears to have been so consistent as to suggest unconcealed contempt."¹⁹ In addition, the legislation did not demand the imposition of consent (permit) conditions on all dischargers. Consequently, many companies were discharging effluent unchecked.

The report also revealed that some of the largest offenders were the local Authorities. As noted earlier, local Authority members

16. DEPT OF THE ENVIRONMENT, I REPORT OF A RIVER POLLUTION SURVEY IN ENGLAND AND WALES, 1970 (1971).

17. Rivers (Prevention of Pollution) Act, 1951, Geo. 6, c. 64; Rivers (Prevention of Pollution) Act, 1961, Eliz. 2, c. 50.

18. SEVERN-TRENT WATER AUTHORITY, WATER QUALITY 1973.

19. Tinker, *River Pollution—The Midlands Dirty Dozen*, 58 NEW SCIENTIST 551 (1975).

figure prominently in the membership of the River Authorities. Problems have arisen because the representatives have divided allegiance. In particular, there has been a reluctance to encourage prosecutions of water quality offenders and to recommend policies which would result in an increase of costs to the local Authorities.

Not only are there important problems of pollution on some of the major rivers in England and Wales, but there are also severe difficulties in a number of the nation's estuaries. Evidence presented to the Royal Commission on Environmental Pollution²⁰ suggests that progress in cleaning up rivers may have been more than counter-balanced by a deterioration in the condition of the coastal zone. This has been due in part to the increasing concentration of activity in the coastal zone. But uncertainties as to the locus of responsibility for pollution control in that region, the division of most estuaries among several authorities, and lack of data have also been responsible.²¹

Another development that revealed weaknesses in the 1963 legislation was the rapid growth in the demand for water-based recreation. Not only have established pastimes like sailing and fishing grown in popularity, but new types of activity like power boating and water skiing have appeared as well. The coast, it seems, no longer provides the primary focus for such pursuits. Rivers and man-made reservoirs have come under increasing pressure for this purpose.²² Over the past twenty years the number of sailing clubs have risen from 400 to 1600, and the number of rowing clubs has doubled. With some 6 million recreationists regularly engaged in water-based activities,²³ conflicts among them and between them and other users are inevitable. A major problem was that there was no agency with overall responsibility for this dimension of water management. The British Waterways Board manages a large network of canals, some of which are used for recreation. The River Authorities' responsibilities for water-based recreation were limited to operations at their own reservoirs.²⁴

THE 1973 WATER ACT

The implementation of the 1963 Water Resources Act was barely underway before some of its deficiencies were revealed. Pressure mounted for a re-examination of the administrative structure and water management policies. In 1969 the government re-established

20. Royal Comm. on Env'tl Pollution, Third Rep. (1972).

21. Clark, *Government Nibbles at Estuary Clean-up*, 56 NEW SCIENTIST 572 (1972).

22. Tanner, *Water for Sport and Leisure*, 40 TOWN & COUNTRY PLAN. 423 (1972).

23. Cossey and Freeman, *A Policy for Recreation*, MUNICIPAL & PUB. SERVICES J. 274 (Mar. 8, 1974).

24. Water Resources Act, 1963, Eliz. 2, c. 38, s. 80.

the Central Advisory Water Committee to carry out a review and offer recommendations. Its report, completed in 1971, concluded that a more comprehensive approach was required and further consolidation of agencies was needed.²⁵ They were divided, however, on the precise course of action that should be taken. The majority of the members of the Committee favored a system which integrated all water management functions, including sewage and sewage disposal, into a system of multi-purpose authorities, while the remainder advocated a system of single-purpose authorities where water supply and sewage disposal would remain separate. The government seemed to favor the former view. In its White Paper, published in December 1971,²⁶ it recommended that a comprehensive approach be taken and that all aspects of the hydrological cycle be integrated in a new system of multiple purpose water authorities.

Meanwhile, the major central government agencies concerned with water management in Britain—the Department of the Environment and the Ministry of Agriculture, Fisheries and Food—circulated a series of consultation papers to affected parties and invited comments. These papers examined the government's proposals in some detail, particularly those concerning the establishment of new agencies, such as the National Water Council, the introduction of new approaches to finance, and the involvement of the public.

Subsequently a Water Bill was drafted, and a Water Act was passed in July 1973. It provided for the establishment of a new administrative framework for water management in England and Wales (Figure 3) which would come into force on 1 April 1974 and thus coincide with the reorganization of local government.

Ten Regional Water Authorities (RWA's) were established; nine in England and one in Wales (Figure 4). These replaced some 1500 water management units, including the 29 River Authorities. The RWA's are multiple purpose bodies, responsible for all aspects of water management including water supply and sewage disposal. The thirty-two private water companies, however, retained their responsibilities for water supply and are acting as agents for the Regional Water Authorities.

Each Regional Authority has an executive board composed of between fifteen to fifty-two members, the majority of whom, as in the previous structure, are appointed by local Authorities in the

25. DEPT. OF THE ENVIRONMENT, *THE FUTURE MANAGEMENT OF WATER IN ENGLAND AND WALES* (1971).

26. DEPT. OF THE ENVIRONMENT, *REORGANIZATION OF WATER AND SEWERAGE SERVICES: GOVERNMENT PROPOSALS AND ARRANGEMENTS FOR CONSULTATION* (1971).

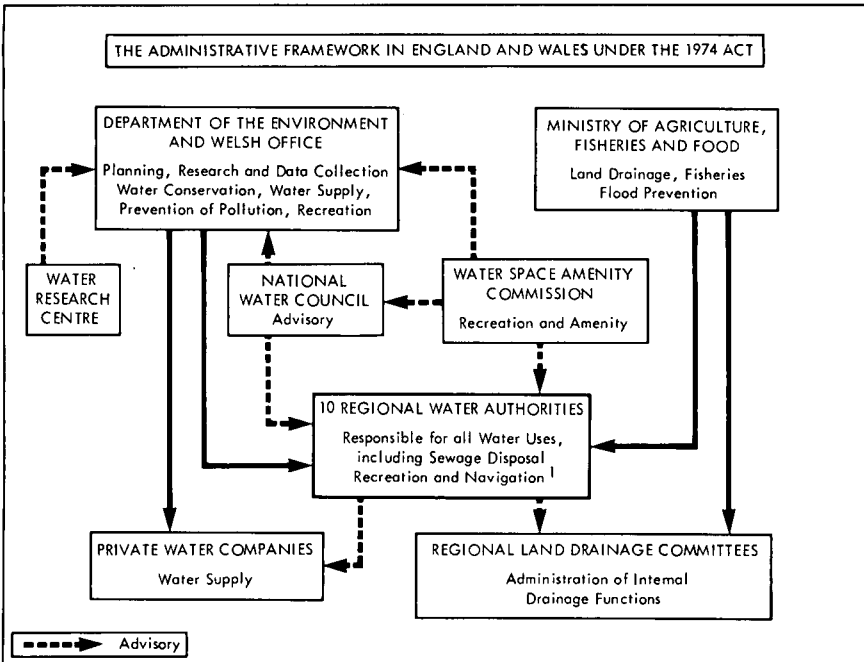


FIGURE 3

region and the remainder appointed by the Secretary of State for the Environment and the Minister of Agriculture, Fisheries and Food to represent specific interests including agriculture, land drainage, industry, water supply, recreation, and amenity.

Regional Land Drainage Committees were created and given statutory powers to carry out land drainage functions, under the guidance of the Minister of Agriculture, Fisheries, and Food and the supervision of the Regional Water Authorities.

The Act abolished the Water Resources Board and provided instead for the establishment of a National Water Council composed of the Chairmen of the ten Regional Water Authorities together with an equivalent number of appointments made by the Secretary of State for the Environment and the Ministry of Agriculture, Fisheries and Food to represent various interests in the water management field, such as agriculture, industry, and fisheries. It is an advisory body providing common services to the Regional Water Authorities and does not retain the responsibilities of its predecessor for planning and research. These functions have become administratively separate, with planning becoming the major responsibility of the new Central Water Planning Unit under the auspices of the Department of En-

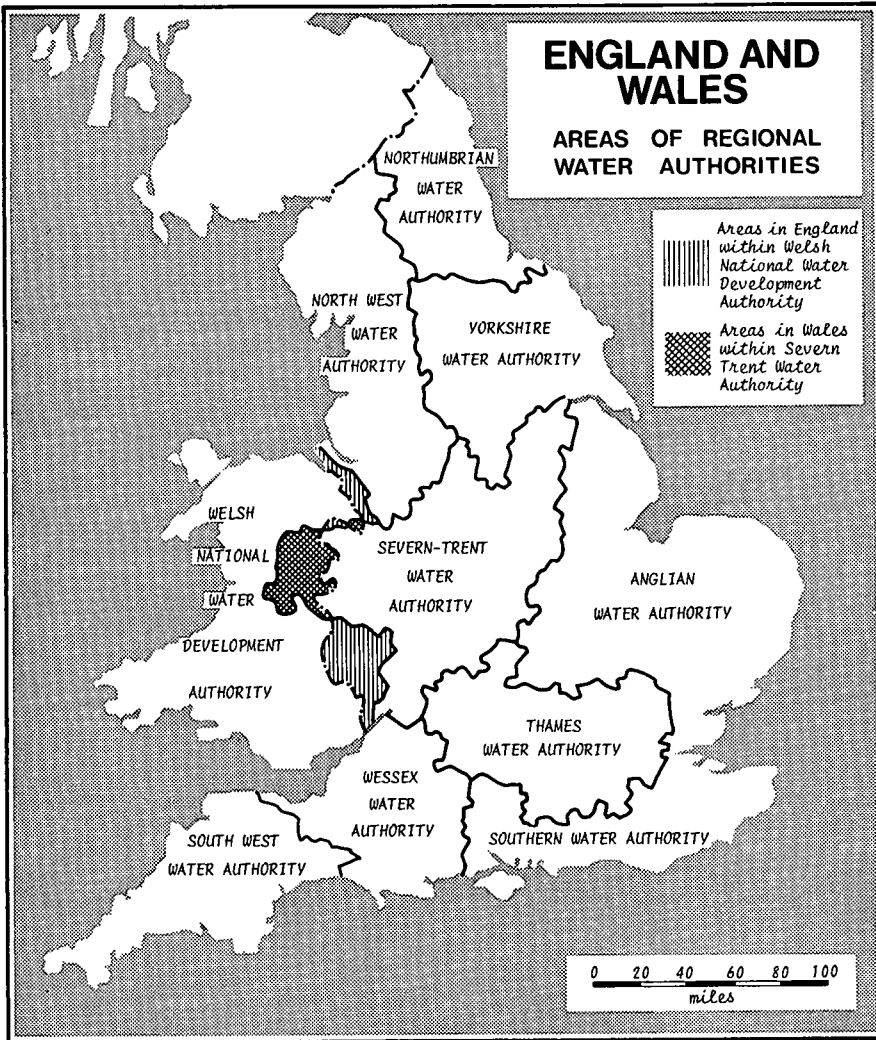


FIGURE 4

vironment and research transferred to the new Water Research Centre. In addition, the 1973 Water Act strengthened the powers of the Regional Water Authorities with respect to recreation and provided for the establishment of a Water Space Amenity Commission responsible for developing and implementing a national policy for water-based recreation. It consists of the Chairmen of the Regional Water Authorities and ten other members appointed by the Secretary of State representing such interests as the Countryside Commission, the Sports Council and the English Tourist Board, as well as local government. Duties imposed on the River Authorities under the 1963 Act have been transferred to the Regional Water Authorities with the addition of a provision for the institution of metering.

Administrative Re-adjustments

The 1973 legislation introduced a number of important changes in administrative structure, reflecting the adoption of a more comprehensive approach to water management and the attempt to improve the economic efficiency of the industry. Briefly, the changes resulted from a shift from single functions to integrated management of several functions, the adoption of the notion of corporate management, the recognition of water-based recreation as an important dimension of water development, an attempt to retain local inputs into water planning and policy-making, as well as a desire to coordinate planning more closely in the regions with the development of national policy.

(A) Multifunctionalism

With the consolidation of 29 River Authorities, 157 water supply agencies, 1393 sewerage and sewage disposal agencies, into 10 Regional Water Authorities, it was clear that a new kind of administrative structure would be required to integrate the various functions and delegate responsibilities to smaller units for operational purposes. Ideally, the Regional Water Authorities would have liked to have been able to divide their areas into a number of multi-functional units, each of which would carry out responsibilities for water supply, sewerage and sewage disposal, recreation and so on. Unfortunately, the areal units previously responsible for these functions did not coincide with each other, except in a few cases, notably the Northumbrian Region. It was thought that an immediate transfer from single function to multifunction regions would cause major hardships, adversely affect morale of workers, and possibly result in

inefficiencies.²⁷ As a consequence, a transition period of from one to three years was adopted by most Authorities. Some like Northumbria, Yorkshire, and the Southwest Authorities introduced multi-functionalism for their entire regions from the outset. Others, such as Severn-Trent and Southern have moved more slowly in this direction.

(B) Corporate Management

One of the most significant innovations in the new set-up has been the establishment of a corporate management structure. Since each of the Regional Water Authorities must integrate a variety of water-related services and must attempt to provide these services at the lowest possible cost, a more sophisticated approach to management is required than was the case with the River Authorities and Sewage Disposal agencies. Basically, there was a need to ensure that broad goals were set, problems in each of the services were recognized, alternatives reviewed in the light of the impact on overall operations of the agency, and costs and revenues balanced to ensure efficient operations.

A special committee (the Ogden Committee) was established to review the different kinds of structure that might be implemented by the Regional Water Authorities to achieve this corporate management approach. The Committee recommended the establishment of a team of Directors under the Chief Executive of the Authority. They would be concerned with planning, finance, operations, scientific services, and administration. Different structures were proposed for large and for small Authorities—but these were differences in detail rather than concept.²⁸

(C) Local Inputs into Planning and Policy-making

Local involvement has long been a tradition in water management in Britain. Recognition of the need to consult local views, as well as those of particular water users, led to a recommendation of the Central Water Advisory Committee that Consumer Councils should be established as an element in the new structure. Some critics saw this as unnecessary and recommended instead that the traditional method of local councils appointing representatives and the government appointing representatives of particular kinds of water use should be retained. This view prevailed. A number of the Water Authorities have also appointed special advisory committees as liaison committees to gather public views on particular matters.

27. Naughton, *How the RWA's Line Up*, SURVEYOR 37 (Mar. 1, 1974).

28. DEPT. OF THE ENVIRONMENT, *THE NEW WATER INDUSTRY MANAGEMENT AND STRUCTURE* 33-34 (1973); *After Ogden*, 7 WATER 23 (1974).

(D) National Co-ordination

The National Water Council was established as a forum for discussion among the Chairmen of the Water Authorities and as a means of providing common services for them. It seems to have enjoyed considerable success in fostering studies of charging policies and other matters of mutual concern. Its role in providing input into the development of national plans and policies is less clear, particularly as the planning function is now carried out by the Central Water Planning Unit, an agency which seems to be largely ignored by the Authorities.

Readjustments to Policy

Besides the modifications to the administrative structure, there have also been some changes in water policy. One of the most significant has been the specific recognition of water as an economic good. Another has been the progressive move towards the nationalization of the water industry in Britain. Both changes have been reflected in the development of policies relating to water charges.

Until 1963 water in Britain had been regarded as a virtually free good. Anyone who wished to take water from a stream could do so, so long as he did not unduly affect use by others. No fee for such withdrawals was imposed. The 1963 Water Resources Act, however, draws attention to the fact that water does have a value, and that this is higher in some uses than others. An elaborate system of water charges, taking into account volumes withdrawn, time and place of abstraction, season, and use was established, yielding a considerable income to some of the River Authorities which administered the charges.²⁹ Their basic purpose was to provide funds for the development of water supply facilities.

The notion of water as an economic good was further expressed in the water charges introduced by the Regional Water Authorities for water services. Hitherto, domestic consumers had paid for water as a part of the local taxes on property (known as "rates"). The actual charge varied according to the value of the property and had no relationship to the amount of water consumed or sewage collected. In its report, prepared for guidance of the new Regional Water Authorities, the Jukes Committee recommended a radical change in this approach. They suggested that:

29. These charges yielded over £1 million (\$1.6 million) per annum to the Essex River Authority and more than £800,000 (\$1.29 million) to the Thames Conservancy. ASSOCIATION OF RIVER AUTHORITIES, YEAR BOOK AND DIRECTORY 1974 (1975).

[T]he new Authorities must not only manage efficiently a substantial programme of investment but must also charge for water services in such a way that full value is obtained from the resources involved. Charging policies should thus be influenced not only by the need to cover revenue expenditure but also by the aim to make consumers aware as far as possible of the real cost of the services.³⁰

This was an important challenge to the water industry, for it meant that costs of providing each service to each customer must be accurately determined and that ways must be found of making the consumer aware of such costs. The Finance Divisions of the various Authorities worked furiously for several months in an attempt to devise formulae for charges for water services. Schedules were drawn up and customers received their first bills from the Water Authorities. The shock waves resounded from one end of the country to the other! The annual bill for water supply and sewage services for an average household was some £23 (\$37), several times what consumers expected it would be. The reason for the high charges was rooted in at least three problems faced by the Authorities. Firstly, they inherited a huge debt from the water supply and the sewerage and sewage disposal agencies. On 1 April 1974, when the RWA's took over, it was estimated at £2,200 million (\$3,520 million). Some £297 million (\$535 million) was needed to finance it in the first year alone. Secondly, an additional £420 million (\$672 million)³¹ was needed immediately to cover estimated capital expenditures during the first year of operations. And thirdly, the RWA's did not qualify for the subsidies which the local authorities had previously been given for the provision of water supply, sewerage, and sewage disposal services. Viewed in this light, the bills received by the domestic consumers do not seem unreasonable. But one can imagine the shock that certain industrial concerns received when they faced increases of several thousand times their previous account. For example, a woollen mill in North Wales had its charge raised from £28 (\$45) to £15,000 (\$24,000).³² It may be anticipated that water bills will continue to go up, particularly as much of the British water supply and sewage disposal system has been in place for a long time. Replacement costs will be very high.³³

Although there is a general insistence that principles of economic

30. Dept. of the Environment, *The Water Services: Economic and Financial Policies: Third Report 5* (1974).

31. Nugent, *The National Picture*, 6 WATER 20 (1976).

32. Daily Telegraph, July 25, 1975, at 13, col. 2.

33. Ritchie, *£6,500 million Down the Drain?*, Sunday Times, July 20, 1975, at 41, col. 2.

efficiency should play a major role in the management of Britain's water resources, there are also feelings that principles of equity and social justice should be taken into account as well. One of the most revealing aspects of the studies undertaken for the Jukes Committee and for the Daniel Committee³⁴ was the huge difference in the costs of water to consumers in different parts of England and Wales. In the Thames region the average consumer pays about 3.1 pence in the £ of rateable value for his water, representing an annual charge of about £15 (\$24) on a rateable value of £200 (\$320). In the Yorkshire region costs are about 7.0 pence in the £. At the far end of the scale are some Welsh consumers who pay as much as 20.0 pence in the £. There has been growing pressure in some parts of the country to equalize the costs of water to domestic consumers, principally on the grounds that water is a commodity that is essential for human health and welfare.

Several RWA's have accepted equalization in principle. The strongest support has been in the Welsh National Water Development Authority region where costs range from 6.8 pence to 20.0 pence in the £ for water supply. A special study of this problem was undertaken by the Daniel Committee in 1975. It recommended not only that there be equalization within the Welsh region but also that the principle be applied to differentials between regions. A Water Charges Equalization Bill dealing with this matter is currently before the House of Commons.

The matter of water charges has raised a considerable amount of debate among economists, water administrators, and others. If one were to follow the dictates of economic principles, the price of water would truly reflect the cost of supply and what the consumer was willing to pay. Insofar as water costs were an important consideration, activity would tend to concentrate in areas where such costs were at a minimum. Those who chose to locate further away would pay the additional costs of supply. If, on the other hand, one accepts the argument that each citizen has an equal right to an adequate supply of water at a price that anyone can afford, then the foregoing principle must be compromised. This, in effect, is the dilemma with which the RWA's are presently faced.

ASSESSMENT OF PROGRESS

Those who framed the 1973 legislation were aware that it contemplated some major changes in the structure of water management

34. Comm. of Inquiry into Water Charges in the Area of the Welsh Nat'l Dev. Authority, 1975.

and some important modifications in policies. They knew that it would seriously alter relationships between water management agencies and local authorities and that people within the industry would need to adjust to changes in the status of their positions within the organizational hierarchy. A number of devices were used to minimize the problems that such alterations occasioned. Vigorous attempts were made, for example, to maintain effective liaison between the new Water Authorities and the local government agencies. Hiring policies were structured in such a way as to ensure that those already within the industry were given priority (the principle of the "Ring Fence"). The problem of redundancy of certain positions resulting from amalgamations was dealt with by a scheme of early retirement (known as "The Golden Handshake") and gradual phasing out of particular posts. Not all changes were expected to take place immediately, and a number of advisory committees were established to recommend ways in which the modifications could be accomplished in the minimum of time and with the minimum of social distress.

Despite all the planning that went into the formulation of the 1973 Act and the precautions built into its implementation, a number of weaknesses have already begun to appear. Some of these were predicted by critics of the legislation at the time it was passed; others have appeared subsequent to its coming into force. Three deficiencies in particular have aroused attention. One concerns the role of the National Water Council. Although it has accomplished a great deal in the way of fostering interchanges among the RWA's and providing certain common services for them, like personnel training and wage bargaining, its effectiveness as a means of developing a national approach to water development remains in doubt. Critics suggest that the fragmentation of water planning is one of the major reasons for this, and they suggest that the Central Water Planning Unit be transferred to the Council, or rather, to the National Water Authority that would replace it. A second deficiency cited is the anomaly of the private water companies. Despite considerable pressure in 1963 and in 1973 to bring them under the jurisdiction of the major water agencies, the thirty-two companies have remained independent, although under some form of regulation. With such companies responsible for 22% of the water supply in England and Wales,³⁵ the central government is anxious to consolidate them into the overall structure. Those in favor of nationalization of the water industry see

35. WELSH OFFICE, MINISTRY OF AGRICULTURE, FISHERIES AND FOOD, DEPT OF THE ENVIRONMENT, REV. OF THE WATER INDUSTRY IN ENGLAND AND WALES: A CONSULTATIVE DOCUMENT 20 (1976).

this anomaly as the only major barrier to its accomplishment. A third weakness mentioned by critics is the lack of an effective structure and policies for dealing with water-based recreation. Some have suggested that an amalgamation of the British Waterways Board with the National Water Council would foster improvements in this direction; others suggest it would create more problems than it would solve, since the Board is burdened with the operation of many inefficient canals within its system.

In June 1974 the central government announced that a major review of the new structure was to be undertaken and completed by 1978. For various reasons it decided to accelerate that review, and in fact proposals were drawn up in early 1976 for modifications to the present structure (Figure 5). These were being seriously considered by the government when the drought occurred.

DROUGHT AS A STIMULUS TO INSTITUTIONAL REFORM

The British water industry has clearly undergone some profound changes in the past thirty years, and especially in the last decade. Such changes have been stimulated in part by increasing demands for

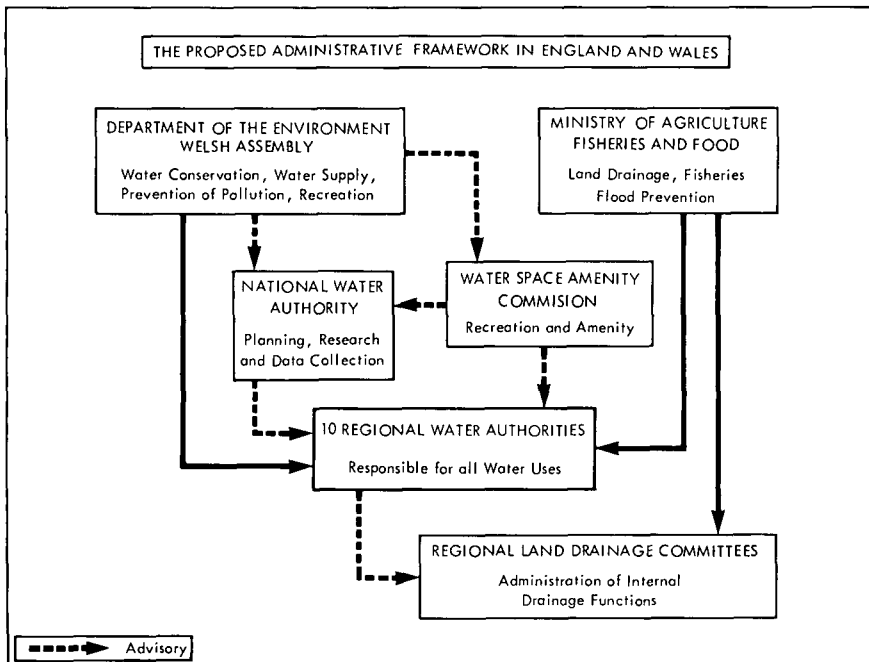


FIGURE 5

water, by growing concerns about the environment, and by the emergence of new concepts of water management. The structure which has evolved offers opportunities not only for the improvement of efficiency in water development and use, but also for the pursuit of various other social goals, such as equity and the promotion of environmental improvement.

Examination of this experience provides an opportunity to gain some insights into the nature and pace of institutional change. It has often been observed that alterations in administrative structures, functions, policies, and laws tend to take place only slowly and sometimes give the appearance of change without it being actually accomplished. It has also been noted that the focus may not be on all institutions at the same time. Thus there may be some alterations in administrative structures but little change in functions or policies. The British experience tends to endorse these observations. The 1945 Water Act,³⁶ for example, was intended to speed up the process of amalgamation of water supply agencies and provide a national perspective, but little was accomplished. An attempt was made to consolidate the management of land drainage, flood control, fisheries, and pollution control under the 1948 River Boards Act,³⁷ but no new approach was introduced. The 1963 Water Resources Act left the administrative framework largely untouched but radically altered the range of functions performed. The 1973 Water Act initiated a major alteration in the administrative structure but introduced few changes in functions. The emphasis of proposals made since then has been mainly on the need for changes in policy.

The British case also indicates that there may be major differences in the pace with which certain modifications are achieved. Under the 1963 Water Act, for example, the charging schemes were introduced very quickly, while other aspects, such as hydrometric schemes and long range planning, were developed more slowly. There were also major areal differences in accomplishment, with the Thames Conservancy and the Mersey, Weaver, and Trent River Authorities moving rapidly ahead on all fronts while the Cumberland River Authority and River Authorities in Southwestern England moved more slowly.

It is difficult to assess the precise influence of drought on stimulating change in British water management. The droughts of the late 1950's certainly played a major role in the formulation of the 1963 Water Resources Act, and the 1976 drought undoubtedly brought

36. The Water Act, 1945, Geo. 6, c. 42.

37. The River Boards Act, 1948, Geo. 6, c. 32.

pressure upon policy-makers to initiate further changes in administrative structures, functions, and policies. It has already led to a broadening of the range of options considered by water managers in England and Wales. While there has been a revival of interest in major reservoir and water diversion schemes in several parts of the country, there has also been active review of such alternatives as recycling, groundwater development, and rationing.³⁸ Some of the emergency measures have been retained on a continuing basis, notably by some of the major industrial consumers. Wiggins Teape Ely Paper Mills at Cardiff, for example, cut consumption by just under 50 per cent and plan to retain these measures permanently.

The National Water Council undertook a study to determine the implications of drought beyond 1977 with a view to establishing strategies for future action. Its report on *Water Supply Prospects for 1977* outlines proposals for short term and longer term policies.³⁹ In the short term, the Council suggests that emergency procedures introduced in 1976 should continue until stocks of water have reached a satisfactory level. For the longer term, the Council proposes the development of more sophisticated contingency plans and an acceleration of the process of implementing water plans.

Some of the developments in the re-shaping of British water management were underway before the drought of the summer of 1976 occurred. What the water scarcity probably accomplished was to accelerate the process by drawing broad public attention to the issues, thereby garnering support for measures, such as the introduction of water metering which may otherwise have been further delayed. It may also furnish the stimulus for the formulation of a national water policy.

38. Okun, *Management of Water under Crisis Conditions*, 12 WATER 2 (1977).

39. WATER SUPPLY PROSPECTS FOR 1977, *supra* note 4, at 2-5.