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GOVERNMENTAL RESPONSIBILITY FOR WASTE MANAGEMENT IN URBAN REGIONS

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Quality of the nation's environmental resources no longer is the special concern of a few conservation enthusiasts or antipollution crusaders. Today the broad-based campaign for better environmental quality includes a diverse range of interests, from civic and student groups to the President and the Congress, and their ranks are bolstered by an impressive number of environmental activists.

Activism on behalf of our limited resources—the air, water and land—particularly in tightly-woven urban regions, to many seems imperative if environmental quality is to be maintained or improved.¹ This is because governmental action to limit pollution and preserve a precious natural heritage has fallen far short of the prevailing rhetoric. Honorable intentions and solemn pronouncements have eventually added to civic frustration, as levels of environmental quality in most urban areas have continued to deteriorate while social expectations have been raised.

The gap between promise and performance has spawned increased demands by activists. American society, they say, must overcome the hypocrisy already perpetrated in the war on poverty and in housing, where the long-stated national objective of “a decent home in a suitable living environment for every American” has never been matched by the resources and effort necessary to achieve it.

Government at all levels can expect to be pushed hard in the 1970's to match its actions with its promises. The federal government will be denounced for not funding pollution programs it has passed; the states will hear conflicting demands for higher quality air and water, better land management, and, at the same time, lower taxes; and local governments will feel the growing force of a citizen action.

However, as public demands for action are accelerated, the nature of the problem and what needs to be done have not been clarified; the efficacy of various courses of action has not been determined; and, above all, there is no clear conception of who should do what,

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1. Dr. Paul R. Ehrlich, a consistent advocate of stronger anti-pollution programs, recently reflected the growing frustration felt by many environmental activists when he said: “The trouble with almost all environmental problems is that by the time we have enough evidence to convince people, you're dead.” *New York Times*, August 10, 1969, § 1, at 53, col. 1.

that is, how governmental responsibility should be allocated for effective waste management.

I URBAN GROWTH AND CHANGE

Allocation of governmental responsibility for waste management is especially relevant when the expected surge in urban growth over the next several decades is contemplated. The nation's growth will be urban growth.² The New York Urban Region, for example, already contains 20 million people spread over 13,000 square miles in three states. By the year 2000 a 50 percent population increase is foreseen, a doubling of per-capita income, more than a doubling of motor vehicle miles travelled, and a fivefold increase in electric power demand.³ Moreover, the New York Region is growing substantially slower than other parts of the country.

The trends imply substantial increases in waste generation and the discharge of residual wastes within larger and larger urban concentrations.⁴ In fact, in the New York Region, solid wastes requiring disposal could more than triple by the end of the century, if the current increasing rate of waste generation continues unabated. Moreover, discharges of hydrocarbons, carbon monoxide, biochemical oxygen demand, and other residual wastes may increase significantly even as strenuous control efforts are undertaken. The pressures of economic growth will be relentless, and they will be concentrated in a wider and wider belt of urbanization as the spreading New York metropolis develops as much land in the next thirty years as it has in the last 300.

The most regional aspect of an urban area is its economy, and when the market economy is imperfect many problems arise. A classic imperfection lies in the use of the air, the water, and the land as common-property resources, like the provision of waste assimilation services. The costs and benefits of resource use are not well allocated by the market economy, because environmental-quality considerations are value laden and to a great extent are outside the market. Where residual wastes are discharged to the environment, a cost may be imposed by one user on others who wish to use a resource for purposes other than waste disposal.

Waste discharges generally result in external costs on a regional

2. A major documentation of urbanization in the U.S. is Pickard, *Dimensions of Metropolitanism* (1967).

3. Regional Plan Association, background research for *The Second Regional Plan: A Draft for Discussion* (1968).

4. See B. Bower, *et al.*, *Waste Management; Generation and Disposal of Solid, Liquid, and Gaseous Wastes in the New York Region* (1968).

scale, which are commonly referred to as air, water, or land pollution. In the words of one report, the problem is one of technological externalities that are "more or less direct effects, which are not priced, which one decision unit might impose on another."⁵ These external effects are not taken into account in the decision to discharge wastes, and there is no economic motive to eliminate or reduce them.⁶

Kneese and d'Arge consider the problems caused by externalities to be "pervasive", because virtually all economic activities contribute directly or indirectly to demands on the environment.⁷ They correctly point out that there is no "final consumption" of goods, and that residuals remain from both consumption and production processes, which ultimately are returned to the environment, in some cases in ways that lower quality and injure receptors. Further, they state:

External costs cannot realistically be treated in the traditional fashion, as somewhat freakish anomalies which may affect isolated parts of an otherwise smoothly working economic system. Instead, our view is that they are inherent in the production and consumption processes of highly developed economies. In this context it becomes a function of government to adjust the framework for voluntary economic exchanges so that they may more realistically be thought to lead to efficient resources allocation.⁸

II

SOME BASIC PREMISES

The first premise is that collective governmental action is necessary to supplement the market in matters of environmental quality. Recognition of this necessary governmental role is rapidly being established, though the methods of intervention have been crude and often hastily conceived. Hopefully the rationale is clear: environmental resources are collective goods not to be used by private interests without consideration of the costs that may be imposed on other users of the environment.

Second, technological externalities cannot be approached adequately by considering the quality of air, water, and land separately.

5. O. Davis and M. Kamien, *Externalities, Information, and Alternative Collective Action*. The Analysis and Evaluation of Public Expenditures: The PPB System, 74 (1969).

6. Additional discussions of externalities are included in the following: O. Herfindahl and A. Kneese, *Quality of the Environment: An Economic Approach to Some Problems in Using Land, Water and Air* (1965); A. Kneese and B. Bower, *Managing Water Quality: Economics, Technology, Institutions* (1968).

7. A. Kneese and R. d'Arge, *Pervasive External Costs and the Response of Society*, The Analysis and Evaluation of Public Expenditures: The PPB System, 87-115 (1969).

8. *Id.* at 88.

Moreover, solid, liquid, and gaseous wastes cannot be managed independently when one form of waste may be transformed into another form during handling or disposal. Public policy for waste management should deal explicitly with these interrelationships, since residuals handling and modification processes, for example, do not eliminate residuals—only their form and/or location may be changed.

Third, the generation, handling, and disposal of wastes is a regional problem which results in external costs that are concentrated in urban areas. A substantial measure of governmental response must be directed to the regional dimension of waste management.

A fourth premise is that waste management is no longer a local responsibility, because most, if not all, of the externalities occur across boundaries of political jurisdictions and/or efficient methods for waste management require management boundaries larger than single local jurisdictions. Program and policy responsibilities must be shared intergovernmentally, and urban regions will require activities by local, regional, state, and federal institutions.

If waste management is a *public responsibility, regional* in its functional extent, contains *interrelationships* among its solid, liquid, and gaseous forms, and requires *intergovernmental* action, how should this responsibility be allocated?

III THE ISSUES

In approaching the question just posed, three basic issues should receive serious attention:

(1) *Environmental quality costs and benefits.* How “clean” should the air, water, and land in urban regions be; for whom, where, and when? What costs are involved? Who should pay these costs? How should environmental quality objectives be determined?

Undoubtedly, the inherent complexity of this issue is far greater than that of waste management technology or even governmental organization. Environmental “cleanliness” is substantially a matter of individual preference, as is willingness to pay for improvements in environmental quality. Mechanisms for assessing public demands for cleaning up the environment, evaluating policy options, and weighing cost-benefit relationships are urgently necessary. No management program or public agency will be very effective without a clear conception of what should be done. What are current and prospective programs designed to achieve? To be against “pollution” is like being for motherhood, and complete purity or absolute certainty are immensely costly, if attainable at all.

In clarifying public policy on the environment, a fundamental need is to be more explicit, to state clearly the factors involved, and to answer four questions:⁹

1. What are the local effects of waste concentrations on people? This question is filled with unknowns, but the distribution of environmental exposure requires serious study. Who is affected? What are the health implications and the economic costs?

2. How are benefits from improvements in environmental quality distributed? Who gains how much from incremental increases in levels of quality? For example, cleaning up the upper Potomac and lower Hudson Rivers would directly benefit two of the nation's largest black communities, whose residents now have limited recreational opportunities. Efforts of this magnitude are very costly, and alternatives must be carefully evaluated; but the need and the number of beneficiaries are large.

3. How are the costs of improvements in environmental quality distributed? This involves who should pay how much and how this relates to current notions of social equity. Given the distinctive presence of externalities, a related question is how to place external costs on those who create them.

4. How do environmental quality objectives and the costs of achieving them measure up against each other and vis-à-vis other social needs? Since public resources obviously are limited, priorities must be established, in effect, among environmental improvements, such as urban water quality, sulphur dioxide concentrations, and clean streets. These must be weighed against better housing, educational opportunity, and so many other efforts.

Answers to these questions will not be easy to find, but neither can they be avoided. Even though people perceive environmental conditions differently, it is of highest importance that government accept its responsibility to evaluate the issues involved and seek answers that maximize public welfare. Current shortcomings in this regard have been wisely noted by Gilbert White: "Pollution or defacement of a physical landscape can only be measured against human preferences. Human perception and preference are related to environment and personality in ways which are not well explored. Much of the public discussion is masked by a rough plaster of horse-back judgments that hide the structure of action and opinion formation."¹⁰

9. The four questions were outlined in discussions with Blair T. Bower, Associate Director, Quality of the Environment Program, Resources for the Future.

10. G. White, *Formation and Role of Public Attitudes*, in *Environmental Quality in a Growing Economy* 105-06 (H. Jarrett ed. 1966).

(2) *Waste management systems.* Environmental objectives can be achieved in many ways. The second key issue is what type of management system could best achieve desired levels of quality, with specified degrees of certainty, for the least costs. Clearly, the current bag of measures needs rationalization. A panel of the National Academy of Sciences recently put it this way: "Happy diversity, local decision, and comparative permissiveness in pollution control are not likely to be so characteristic of future efforts in the field. A truism holds that we shall face a period requiring much more sophisticated and intensive management of water and air resources."¹¹

Systematic waste management incorporates a wide range of possible techniques and activities, which form an arsenal of measures for improving environmental quality. For example, public action that would stem the soaring solid waste generation rate and/or stimulate recycling the solid wastes back into production may be far less costly, both directly and indirectly, than expanded handling and disposal systems.¹² Policy options of this kind are worthy of much more serious consideration than they now receive.

In order to fill many analytical gaps and permit a more rational management approach in urban regions, Kneese and d'Arge have proposed an advanced analytic technique.¹³ In essence, it would be the development of a regional materials-balance model and regional energy balance model, so that the flow of residual wastes could be pictured. Then economic-base and input-output information would be used to project future economic activity and ultimately future residuals flows. The impact of alternative management techniques could then be gauged, including the costs and benefits and possible tradeoffs among various approaches. In this way, more effective environmental standards and programs to achieve them could be developed.

Of course, the conceptual clarity of such a procedure is clouded by severe data-collection problems, bureaucratic provincialism, and traditional separation of economic and physical analyses, which the proponents well recognize. However, only a comprehensive procedure such as this can help in understanding the economic complexities of urban regions, as they relate to residuals problems.

Institutional and program change, therefore, should be grounded

11. National Research Council, Committee on Pollution, Waste Management and Control; A Report to the Federal Council for Science and Technology 206 (1966).

12. Direct cost reductions would result from less required capacity in collection and disposal equipment. For example; indirect costs resulting from the effects of residual waste discharges to the environment also could be reduced.

13. A. Kneese and R. d'Arge, *supra*, note 7.

on a thorough understanding of waste management systems in urban regions. If existing ad hoc approaches are to be replaced by comprehensive regional management, the entire urban economy in general, and the generation and movement of residual wastes over time and space in particular, need to be much better understood.

Moreover, environmental quality should be considered in the context of overall urban growth and change. When the Regional Plan Association of New York, a private, non-profit planning agency, undertook research for its Second Regional Plan in 1965, it commissioned a study to determine whether the Region could bear its contemplated growth without being overwhelmed by environmental pollution. The answer was that the Region's present and future solid, liquid, and gaseous residuals could be properly managed without environmental deterioration, provided these wastes were avoided or disposed of as interrelated parts of a system of waste management.¹⁴

The study did more than extend emerging ideas; it broke new ground and taught the Association many things about the ill-defined field of pollution control. One lesson was that a waste management system includes much more than just discharge controls. It consists of facilities for handling, treating and disposing of wastes; facilities for modifying the assimilative capacity of the environment; regulations for modifying the generation as well as the discharge of wastes; and facilities and procedures for monitoring and data analysis.¹⁵

(3) *Allocation of governmental responsibility.* In view of the first two issues, what are the respective roles, both in policy and operations, of the federal government, the states, local governments, and urban regions themselves? It is increasingly apparent that who develops public policies and shapes government institutions has a lot to do with the effectiveness of efforts directed toward improving and maintaining environmental quality.¹⁶ However, a prominent political scientist does not look upon the situation optimistically: "Present governmental structure reflects a past whose problems could be dealt with in limited areas and with limited resources. The problems of environmental quality, except where approaching the catastrophic, are poorly recognized in the conventional wisdom and are ill adapted

14. Bower, *et al.*, *supra* note 4, at 206.

15. *Id.* at 23.

16. The three issues have been discussed sequentially, but in practice they are closely interrelated and not easily divisible. For example, the levels of environmental quality desired are at least partly a function of how much they cost to achieve, and management costs in turn are directly affected by the management techniques used and how programs are implemented and agencies organized.

to receive appropriate recognition through the existing structure of government, especially at state and local levels.¹⁷

IV

ALLOCATION OF INTERGOVERNMENTAL RESPONSIBILITY

As the nation's environmental quality objectives begin to be clarified and greater understanding of waste management systems is gained, it will be possible to move toward a more rational allocation of governmental responsibility for waste management in urban regions. Current ad hoc approaches—federal, state, interstate and local—are adequate testimony of the unevenness and muddled nature of present efforts. One recent report indicates that pollution-control programs generally have not improved water quality, despite several billion dollars in governmental outlays.¹⁸

Any discussion of what levels of government should be responsible for a key dimension of the public welfare cannot be definitive when public responsibility for quality of the environment has yet to become firmly embedded in United States public law. The following should be construed as a tentative guide to what governmental levels should determine environmental objectives, set policies, and undertake waste management activities.

The fundamental issue, at this juncture at least, is not so much agency organization or content of individual programs as it is designation of responsibilities within an obviously intergovernmental concern. In urban regions, a major unanswered question is how the programs and policies of federal, state, and local governments should relate to one another. Should state actions and plans fit into those of localities, or vice versa? Where does federal responsibility fit in? Who should fund environmental programs, assess public attitudes, and conduct activities and services? Part of the current answer, for example, is reflected in the steadily tightening requirements of the federal government that urban regions have comprehensive regional planning programs as a condition for receipt of federal grants for

17. N. Long, *New Tasks for All Levels of Government*, in *Environmental Quality in a Growing Economy* 141 (H. Jarrett ed. 1966).

18. The U.S. General Accounting Office announced in November, 1969 that an outlay of \$5.4 billion to reduce water pollution had accomplished little or nothing at all since 1957. Instead, while municipal treatment facilities were built, private industrial discharges have largely gone unchecked. In view of differences among areas of the country and the substantial increases in liquid waste generation during the 1957-1969 period, however, the GAO report probably exaggerates the problem in general and fails to acknowledge specific regions where progress has been made.

capital improvements. But this approach alone has not provided for an effective distribution of intergovernmental responsibilities.

Once these questions are answered, agencies can be better designed to carry out governmental responsibilities. Even then, however, no one organizational model will be suited to all regions. Too often governmental analysts have prematurely occupied themselves with metropolitan organizational designs, including super authorities and general-purpose regional governments, when they should have been advocating reallocation of governmental responsibilities among existing governmental agencies to meet changing urban needs.

The following discussion hopefully sheds light on which governmental levels should be concerned with: (1) environmental policy and management financing; and (2) program design and operation.

(1) *Environmental policy and management financing.* Environmental policy is emerging as a basic responsibility of government. However, the public sector has failed to respond in two ways: (1) individual levels of government have not developed comprehensive environmental policies and (2) intergovernmental agreement on a national environmental policy is conspicuously absent.

An awareness of these failings is evolving. Senator Henry M. Jackson has proposed a statutory declaration of national environmental policy. On one occasion he stated: "A new emphasis in national policy is needed to meet the threatening deterioration in the quality of our environment. The time has come to make explicit what had been implicit in our national policy since the early days of the republic. We need to affirm by appropriate policy statement and by institutional means that protection of the life-sustaining elements of our natural environment is a public responsibility."¹⁹

The federal role in establishing national environmental policy is a leadership role, one of initiation and goals formation, of establishing incentives and developing environmental management approaches, as well as seeking scientific advances. Only the federal level can truly internalize all the externalities, establish national goals for environmental quality, evaluate and set nationwide priorities, and provide the resources for achieving these objectives. For example, only Washington can effectively arbitrate between consumer demand for disposable products and the mounting glut of solid wastes; the conflict between carbon monoxide concentrations and transportation needs; and among competing uses of the nation's river systems.

However, the national government has yet to evolve a broad and flexible doctrine. Leadership is embodied in the presidency; it is the

19. Jackson, *Environmental Policy and the Congress*, 28 Public Administration Review 303-304 (Caldwell ed. 1968).

President who occupies the national pulpit. Until the executive office moves beyond hesitant steps, a focused, cohesive, nationwide strategy will not be forthcoming.

President Nixon has made two moves in the right direction. He formed the Environmental Quality Council in May, 1969, to be composed of the President, Vice-President, six Cabinet Secretaries, and the Presidential Science Adviser. When this Council was criticized for its lack of independent experts, the President signed legislation in January, 1970 creating a three-member Council on Environmental Quality. Further, a joint Congressional committee, related to the Council in the manner that the Joint Economic Committee relates to the Council of Economic Advisers, has been advocated to help forge the requisite national commitment to environmental protection.

Beyond the executive office and the Congress, environmental management requires integrated activities by the dozen or more federal agencies that deal with environmental problems. Some observers would consolidate all waste management and conservation responsibilities in a single administration, in which various program trade-offs and policy options in the environmental sector could be evaluated systematically. Others, such as Senator Edmund Muskie, would set up an independent, "watchdog" agency to exercise regulatory functions. Whatever approach is used, it must be emphasized how important an integrated attack is to national policy, because the actual shaping of environmental policies is largely left to administrative action, whatever governmental level is involved.

Consequently, federal responsibility must be embraced by the President and by Congress and goals and guidelines developed which give broad yet firm direction to the nation's environmental efforts. What is needed is a commonality of purpose, under which federal, state, and local activities can be framed. For example, a conceptual framework generally would have overall goals and financial support at the national level, coordination and program detail by the states, and needs determination and program delivery at the local (or regional) scale. However, policy and management obviously are not separable by governmental level, nor should they be. Certain management activities must be federally administered, while important policies need to be formulated by state and local governments. For example, direct federal management of programs to reduce the proliferation of packaging wastes may be mandatory, and state and local governments must decide which environmental-improvement programs deserve highest priority by geographic area.

There are fifty sovereign governments in addition to Washington, however, which have responded even less adequately on environ-

mental policy. The states have "residual sovereignty" under the Constitution and are responsible for overall environmental policy within their borders—which completely embrace most urban regions. Moreover, the states are the source for all local government powers and duties. Together, these 51 governments have ultimate responsibility for environmental policy and waste management activities.

In the development of environmental strategies and waste management programs, the situation of state government is the keystone of intergovernmental efforts in urban regions. Under the federal system, the states are responsible for mediating between federal policy and local needs, for planning state-wide programs and coordinating management activities, and for evolving and stimulating local and regional management approaches. Where the states fail to act positively, and most have, the federal system is seriously weakened.

On the other hand, responsibility for policy determination should bear a more direct relationship to the financing of management activities than it has, especially at the federal level. In other words, the federal establishment should use its superior fiscal resources to provide a major portion of the funds necessary to meet the governmental costs involved in reaching stated national objectives.

Perhaps a good illustration of this principle is the environmental program activity of the federal government in the 1960's. Both the air and water quality acts passed by Congress and signed by the President have set ambitious quality standards for urban areas. These policy objectives were established in the face of considerable unknowns about their efficacy and the costs of achieving them, even though the standards should have been arrived at after careful analysis of what levels of quality were desirable where, when, and for whom.

In any case, the federal government has never assumed responsibility for more than a small portion of the costs of programs that state and local governments are expected to implement. While many observers have asked whether this constitutes federal leadership or dictation of ends without the means, state federal responsibility for environmental standard setting and program funding has not been resolved.

According to one source, the gap between federal authorizations under the Water Quality Act of 1965 and actual appropriations had grown to more than one billion dollars by the end of 1969.²⁰ As state and local officials have complained about being shortchanged on authorized federal aid, the program itself is under growing criticism for its ineffectiveness.

20. Hill, *Politics and Pollution*, The New York Times, November 11, 1969.

Consequently, while national environmental-quality objectives have never been very explicit, they also have not been matched with necessary financial commitments. A rational system of intergovernmental assistance is crucial to effective waste management. The fiscal strength inherent at the federal level needs to be distributed in ways that further national objectives. Intergovernmental grants have been the primary vehicle. Grants should assist state and local governments to achieve effective waste management, and undoubtedly federal aid will rise in the 1970's, particularly when and if the Vietnam "peace dividend" materializes. But should conditional, block, or revenue-sharing grants be used? Perhaps the key issue is how to compromise broad federal and state policy with the need for local program flexibility. The problem is more one of the manner of grants-in-aid, not whether they are required.

(2) *Program design and operation.* While the federal government has primary responsibility for establishing a national environmental policy and for funding programs to implement that policy, the design, operation, and delivery of waste management programs is basically a state-local responsibility. The states occupy the pivotal role in developing state-wide environmental policies—within national goals—and coordinating and programming state-local management operations. The states need to determine what agencies of state and local government can most effectively conduct waste management activities in urban regions.

The states must act despite the influence of direct federal-local programs, which have greatly accelerated since their inception in the 1930's, and are now firmly established. Federal aid to localities came as a response to perplexing problems—housing, welfare, transportation—that were local in impact but national in effect. But this has not supplanted the fact that localities are creatures of state action and subject to state will. Although direct federal-local cooperation is probably here to stay, the fluid state of American intergovernmental relations is moving toward the need for sweeping steps to restore a balance in the federal system, in order to deal effectively with regional problems.

The states face strong pressures for changes in institutions and programs, if two emerging trends are to be resolved. First, public demands for environmental improvements will be directed to state and local governments—particularly localities. Second, the federal government, under a new administration dedicated to enhancing state participation in the federal system, may keep away from detailed program involvement in most functional areas.

The states will have the option of moving either through sub-

stantial transfer of responsibility to local or regional governmental units or by state operation of regional environmental quality management activities. The latter option is emerging in more progressive states, such as New York and California, which appear impatient with inactivity on the part of localities. New York, for example, has recently created powerful state agencies to move directly to achieve state policies where localities have been unable or unwilling to meet social needs. The Pure Waters Authority was established in 1967 to assist localities in the construction and operation of water quality control and solid waste management activities; the Urban Development Corporation was created in 1968 to build housing and related facilities across the state, whether invited by local governments or not; the Metropolitan Transportation Authority (1965) builds and operates transportation facilities in the New York Urban Region, including both New York City and its New York State suburbs; and in its 1970 session the legislature, following a recommendation by Governor Rockefeller, created a Department of Environmental Conservation to combine waste management and conservation programs in a powerful state agency.

The New York State Pure Waters Authority best exemplifies how one state has moved directly into management operations for maintaining and improving environmental quality. The Authority's legislative mandate states its functions unequivocally:

“. . . The purposes of the Authority shall be the planning, financing, construction, maintenance and operation of sewage treatment works and solid waste disposal facilities, the construction on behalf of municipalities of sewage treatment works, sewage collecting systems and solid waste disposal facilities and the assistance of municipalities in the planning, financing, construction, maintenance and operation of sewage treatment works, sewage collecting systems and solid waste disposal facilities. . .”²¹

Although activities of the Authority have been hampered by an uncertain bond market and rising interest rates, it considers itself “operations oriented” and capable of assuming both local and regional solid or liquid waste management operations. In fact, the Authority has offered to take over the functions of several localities and counties, after consultants established the case for a comprehensive or areawide approach.

In 1970, the Authority was reconstituted as the Environmental Facilities Corporation and its capabilities expanded considerably. The new corporation can undertake virtually any capital project hav-

21. Chapter 722, Laws of 1967, New York.

ing to do with waste management, either with or without the collaboration of local government.

New York is not alone. Many states are establishing state agencies for local affairs, primarily under impetus of the 1966 Metropolitan Development Act which authorized Federal grants to assist states in aiding local communities to solve urban problems. One authority says the trend toward transferral of operating responsibilities to such agencies will continue "primarily because of the growing need for coordination of state and federal grant-in-aid programs."^{2 2}

V

CRITERIA FOR REGIONAL ORGANIZATION

It seems clear that the states hold primary responsibility for responding to waste management problems in urban regions. Whether this responsibility should be institutionalized in a regional agency, assigned to one or more state agencies, or left to the devices of existing or modified local governments is for individual states to decide. Even though the response will probably differ from region to region, especially when interstate areas are considered, among the most fundamental criteria to be considered in determining the appropriate institutional approach are geographical coverage, functional scope, operational authority, and metropolitan representation.

Geographic coverage, in concept, should be as broad as the regional needs to be met. The idea of the "problem shed" has been offered to define the regional need for waste management.^{2 3} It covers a region that is "big enough to internalize the externalities," or basically, the area broad enough to embrace all the interrelationships among those discharging wastes and those affected by the discharges.

This makes the problem shed a region that could include all persons using water or discharging effluents in a river basin; or everyone affected by the discharge of gaseous residuals in an air basin; or the entire urban area in which solid wastes are generated, collected, modified, and disposed of. Under such broad definition, the problem sheds for solid, liquid, and gaseous residuals are not coterminous and might extend well beyond the economic extent of the urban region. But within the urban core, waste management problems overlap and are most acute. It is this area where management options should be examined and areawide techniques applied.

For example, the air quality control regions being designated

22. Zimmerman, *A Growing Trend: State Agencies for Local Affairs Moving from Advisory to Coordinating and Operating Roles*, 63, *National Civic Review* 467 (1969).

23. See, for example, Kncese, *The Problem Shed as a Unit for Environmental Control*, 16 *Archives of Environmental Health* 124-127 (1968).

under the Air Quality Act of 1967 are problem sheds for air resources management. The Delaware River Basin Commission is an excellent example of a problem-shed agency for water resources management. Nevertheless, where the various problem sheds for solid, liquid, and gaseous residuals come together with the urban economic region is where some degree of centralized decision making for environmental quality should occur. One example of such a region is the San Francisco Bay Area, where the waste management problem shed may approximate the nine-county jurisdiction of the Association of Bay Area Governments.²⁴

A second criterion, operational authority, brings up the question of how much should actually be done regionally, beyond policy direction. Obviously, there are economies of scale to be gained from regional or subregional management techniques. One serious study of regional waste management has concluded that problem-shed agencies should "have sufficient authority, responsibility, and resources for effective action, including an integration of planning with operating activities."²⁵ Such extensive authority would include all relevant waste management activities (research and planning, controls and regulation, certain taxes and assessments, and the establishment and operation of treatment and disposal facilities) to the extent that these measures are best performed regionally and are the most efficient solution to the problem.

For the purpose of water resources management, the "Genossenschaften" of the Ruhr area of Germany have operated for years with these kinds of powers and responsibilities, and in this country, the Delaware River Basin Commission has extensive authority for a wide range of water management activities.²⁶

The question at this point in time is how state government should allocate operational responsibility for waste management. It is not whether a wide range of management activities should be undertaken.

A third criterion is functional coverage. A strong case can be made for comprehensive regional policies that embrace air and water quality control and solid waste management. Traditionally, the popular view has been of three separate functions. But the critical interrelationships among waste forms and with urban development

24. This example does not preclude the possibility of extending the management jurisdiction for, say water quality control, beyond the nine-county area. Since the region's watershed may be wider than its problem sheds for air quality control and solid waste management, this may be necessary and desirable.

25. National Research Council, *supra*, note 11, appendix 7, at 225.

26. See Kneese, *The Ruhr and the Delaware*, Journal of the Sanitary Engineering Division (1966); see also Kneese and Bower, *supra*, note 6, Chapters XI and XII.

require an integrated governmental response. High-level waste treatment not only fails to eliminate waste residuals, but where specialized agencies now deal with three problems separately, the external effects created by the operations of each need to be taken into account, as with solid waste incineration and air pollution.²⁷

The fourth criterion considered here is metropolitan representation. At issue are political accountability and intergovernmental participation. If region-wide management decisions are to be centralized for waste management and regional policies established, who should make them—elected or appointed officials? Should they represent the state, the local governments, the federal government, the voters directly, or some combination of these?

To the consternation of many political observers, government in metropolitan areas has endured basically unchanged in spite of myriad changes in urban society. Somehow metropolitan policy making and administration have been accomplished in one way or another, either piecemeal or more cooperatively, consciously or unconsciously, by the interests involved. The versions number as many as the nation's urban regions, although the common approach of federal programs has tended to have a leveling influence.

Many arrangements are possible for metropolitan representation, including representatives of local government on a commission, gubernatorial appointees to a regional authority, directly-elected legislators from local districts, or through state-agency representatives.²⁸ Not only is political representation crucial to the assessment of public needs and wants, but it is a paramount consideration in deciding the manner of policy determination and operational authority. For example, if a regional organization is established for waste management, its method of political representation may have a strong influence on the policies it develops. If constituent local governments are each represented, a strong possibility exists that parochial interests may take precedence over the regional viewpoint and the area-wide approach may fail. If gubernatorial appointments are used, regional or state-wide views may tend to overlook local needs and wants.

27. Should waste management be combined with other regional functions in a multi-purpose metropolitan organization, such as those discussed so extensively for St. Louis, San Francisco, and other urban regions? Except for Miami, Nashville, and Toronto, few regions have been able to achieve metropolitan governments, and many observers look upon such approaches with disfavor. For good discussions of the San Francisco Bay Area experience, see Scott and Bollens, *Governing a Metropolitan Region: The San Francisco Bay Area* (1969).

28. An analysis of how metropolitan representation has been accomplished in various types of regional agencies is found in Bromage, *Political Representation in Metropolitan Agencies* (1962).

Table I provides an illustration of how pertinent criteria can be applied to alternative regional approaches for waste management. Only the four general criteria just discussed are listed as examples; many others might also be relevant, particularly in view of the urban region in question.

Table I
EVALUATING ALTERNATIVE GOVERNMENTAL APPROACHES FOR
REGIONAL WASTE MANAGEMENT

		Criteria for Evaluation				
		Geographical Coverage	Functional Scope	Operational Responsibility	Metropolitan Representation	Others
Alternative Governmental Approaches	Interlocal Agreements					
	Single-Purpose Authority					
	Multi-Purpose Authority					
	Voluntary Metropolitan Council					
	(WEIGHTS ASSIGNED BY URBAN REGION)					
	Urban County					
	Metropolitan Federation					
	Transfer to State Government					
Others						

Likewise, there are many possible forms of regional organization, ranging from voluntary councils of local government to general-purpose metropolitan federations. The six examples listed are far from a comprehensive range of alternatives, although they do exemplify the numerous possibilities.²⁹ For example: interlocal agreements among contiguous municipalities often are used to meet area-wide problems, such as maintaining an adequate water supply; single or multi-purpose authorities have increasingly been formed in recent years to solve urban problems outside the regular channels of

29. For a fuller discussion of alternative approaches to governmental reorganization in urban regions, see the work of the Advisory Commission on Intergovernmental Relations, particularly *Metropolitan America: Challenge to Federalism* (1966).

local and state government; voluntary metropolitan councils of government are designed to bring about regional cooperation without diminishing local autonomy; the urban county provides a wide range of urban services over a region that is predominantly within that county; the metropolitan federation is a new level of government which conducts selected regional functions independent of local responsibilities; and transfer of responsibility to state agencies involves reliance on state government for a region's functional needs.

Each of these or others may be suitable to a particular urban region, and a matrix can be developed to evaluate the case at hand. Weights can be assigned to each approach according to how well it fulfills the criteria chosen.

Obviously, no approach is suitable to every region. The urban county may best fit the requirements of smaller regions that fall entirely within one county. A metropolitan federation could be acceptable in regions like the San Francisco Bay Area, where political cooperation has made substantial progress in recent years. Voluntary councils provide a forum for discussion, but are limited by their inability to operationally conduct waste management activities. State agencies may be the most effective solution in interstate regions, if such agencies themselves meet the criteria used.

VI

PROSPECTS FOR CHANGE

In a time when demands for "good quality" environments are widespread, American social priorities are being hotly debated more than ever, and the state of intergovernmental relationships is in great flux. Indications are that government action to maintain and improve environmental quality will be accelerated, but also be strongly affected by policy tradeoffs vis-à-vis other social demands. The allocation of governmental responsibility will face the growing pressure of conflict as intergovernmental problems push all levels of government toward a sharing of responsibilities. Apart from national defense, virtually nothing will be explicitly assignable by governmental level. Even where assignment of responsibility is attempted according to careful analysis, the forces of "politics" will tend to predominate over those of political analysis.

However, this is not to say that change will not occur. The prospects for governmental adaptation are encouraging in an absolute sense, but the challenge will be to overcome unevenness of effort and failure to keep pace with environmental deterioration. The only way that the gap between American environmental-quality objectives and

current environmental prospects can be narrowed is through federal and state action.

The federal government needs to strengthen and clarify its leadership role in national environmental policy. It must explicitly state what its programs are designed to achieve, provide funding to implement these objectives, and loosen the inflexibility which characterizes the federal approach to waste management.

State government holds the key to effective regional management. So far, the states have not responded to the challenge that their responsibility carries, either through state policy or regional action. As the Advisory Commission on Intergovernmental Relations has noted continually since its inception in 1959, until the states move forcefully against urban problems, the problems will not be overcome.³⁰

The states appear to be at a crossroad. Should they move toward greater operational involvement in local and regional affairs as the primary avenue for urban problem solving? Or should the states extend local responsibility, via home rule or new institutional arrangements?

Already the conflict between local self-determination and the right of the states to exercise supervisory responsibility over their municipal subdivisions is hazy with emotionalism. Yet functions like waste management require larger management jurisdictions to be effective. What was functionally logical even a decade ago has been outmoded by changed conditions. In addition, just as the states lost responsibility to the federal government by inaction, the localities have been unwilling and unable to assume responsibilities which should be theirs.

Perhaps greater reliance on county government may be part of the answer, rather than extension of responsibilities to small municipalities. Counties have area-wide jurisdictions and can effectively carry on a large number of waste management activities. No matter what route is chosen, the need for a prompt and vigorous response at each governmental level, based on intensive political and administrative analyses, will be necessary if environmental quality is to be achieved in urban areas, not just talked about.

30. See the recent ten-year summation by the Advisory Commission on Intergovernmental Relations, *Urban America and the Federal System* (1969).