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REFLECTIONS ON LAND USE PLANNING--
A SEARCH FOR TECHNICAL, ECONOMIC, SOCIAL
AND ECOLOGICAL HARMONY

by

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B.S.C.E. University of New Hampshire, 1959

Presented in partial fulfillment of the requirements
for the degree of Master of Resource Administration

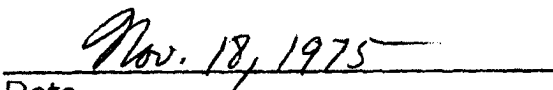
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PREFACE

We of the industrial age boast of our control over nature. Plant or animal, star or atom, wind or river--there is no force in earth or sky which we will not shortly harness to build the "good life" for ourselves. But what is the good life? Is all this glut of power to be used only for bread and butter ends? Man cannot live by bread, or Fords, alone. Are we too poor in purse or spirit to apply some of it to keep the land pleasant to see, and good to live in?

Aldo Leopold¹

¹Aldo Leopold, Game Management (New York: Charles Scribners Sons, 1933).

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CHAPTER I

INTRODUCTION

Life in the first half of the 1970s leaves little doubt that the last quarter of the Twentieth Century will be a new and trying test of man's ability to master his world. The more we have attempted to manage and manipulate the forces at work, the more we have questioned our ability to control them successfully. Yet we renew our efforts, surprisingly, with a bit of optimism born of an ability to survive some rather drastic alterations to our traditional assumptions. More and more we find ourselves dealing in the mainstream of community life and the give and take of economic, social and political activity.

It is hardly germane whether we find this transition to our liking; efforts to revert to the former isolation, common to many professionals, would appear to hold little promise. What is important is that we acknowledge the new circumstances, realize the opportunities that accompany the changes, and commit ourselves to the fullest possible participation in the processes and decisions which will shape the future.

Issues having the potential to effect future conditions such as land use legislation, regional and state planning agency powers, and the no-growth syndrome are of direct self-interest to us all. Yet even these issues generate little interest among some of the components of our national professional societies. When economic conditions are good, "there is no time" for such activity. When conditions are not, "we cannot afford it."

To be effective requires that we be well informed; but above all, we need to learn to consider the public and professional events of each day in the larger context of community, state and national needs.

Management and manipulation of the economy of our country and throughout the world, whether resulting from wisdom or desperation, is now a fact of life. As top economic experts of our government are free to admit, no one really knows if a democratic society like ours can successfully manage its economy. We are without real precedent and experience and we must develop new mechanisms for economic management and timely, effective analysis of results.

Similarly, free-wheeling, uncontrolled growth of physical development has proved so inefficient, inhumane, and environmentally degrading that more management and control in this area seems a necessity. The fact that the industrialized nations have

been in the process of destroying the natural environment and making it unlivable has, fortunately, become widely understood in the United States. With this awareness has come a new array of government mechanisms and citizen activities to reverse this process. Unfortunately, the emotionalism that has accompanied this concern has tended to polarize people into two camps, each generally intolerant to the other's point of view. What seems to be needed is a third force to arbitrate the extremes and to balance rationally the necessary preservation of our environment with the reasonable needs of man. Resource Managers, through knowledge and training, may well be in a good position to play this third role in local, state, and national activities required to resolve these issues through Land Use Planning.

The people of the United States have always been of two minds about planning, including planning for national development. There is the long history of antipathy to planning which involves interference by government with the decisions of private individuals and organizations. Senator Henry Jackson says bluntly, "In the past, land-use decisions were made by those whose interests were selfish, short-term, and private. In the future these decisions will be long-term and public."¹

¹Robert Stinson, "Construction Business of the Future," Engineering News-Record, April 30, 1974, p. 291.

A basic shift in political and economic philosophies will occur when government, directly or indirectly, controls the use of land. Laws aimed at protecting the environment can effectively prohibit the highest economic use of land, a doctrine thought basic to the free enterprise system. Yet most of us are not sure of what we as individuals want, either for ourselves or for society. The prevalent tendency of contemporary society is to depend upon the market and steadily rising purchasing power for things which we do want, while being forced to turn to collective action to eliminate things we do not want. An important aspect, therefore, of the National Land Use Planning development task is the creation of an atmosphere which will support exploration and innovation. Plainly, innovation in the public sector must be based on public demand. One basis of demand is public dissatisfaction with existing conditions, but, given the fact that the majority is not as yet crisis-minded, it is highly likely that National Land Use Planning development policy in the foreseeable future will be a series of incremental steps and adjustments, rather than quantum leaps.

Exploration and innovation in the development of Land Use Planning must be of an inter-disciplinary nature. Our current scope of inter-disciplinary action is at best a poor and ineffective method for the following reasons:

1. When we focus only on biological, technical, physical,

economic and social parameters, it leads us to view these parameters as separate considerations when, in fact, they are inextricably linked.

2. The results of emphasizing technical judgments of the social dimension lead to a significant loss in quality.

3. Man faces an environmental predicament caused by the essential indeterminacy and unpredictability of outcomes of man's actions. Existing strategies of environmental management are poorly designed and inadequate to accommodate this predicament.

4. Change within individual professions is difficult because real short-term conflicts of interest divide those with a stake in long-term change. In the area of ecology this is particularly clear.

5. We live in a system where technology demands, society adjusts and responds rather than a continuous cycle in which society demands, technology responds.

As one looks into a misty future, he may then conclude that the wise use of Land Use Planning involves both vision and the will and capacity of people to act.

In essence too many areas have been planned by default, their "design" being the composite of the haphazard, ecologically insensitive decisions of private groups and public agencies working without a comprehensive concept of how areas should develop and when they should stop. Local and state governments are often unenthusiastic about collaborative planning. They may be competitive

for tax dollars and public support; extremely suspicious that land planning may benefit other governments at their expense; they may be inspired by inconsistent or contradictory land use philosophies-- a frequent occurrence when one government represents a growth-minded constituency while another does not.² Then, too, the elective policy-making bodies of many state and local governments are dominated by men and women whose businesses prosper with community expansion--bankers, real estate people, small businessmen, land developers and others from service industries. For all these reasons and more, the U. S. Conference of Mayors recently concluded, "Local officials tend to think of growth as being virtually the sole criterion of economic health and their economic programs are dedicated almost exclusively to growth."³

This paper will explore the history, purpose and potential of Land Use Planning and how it effects the professional Resource Manager.

²Walter A. Rosenbaum, The Politics of Environmental Concern, (New York: Praeger Publishers, 1973), p. 283.

³New York Times, (New York, New York), News Article, September 30, 1972.

CHAPTER II

HISTORICAL PERSPECTIVE

American attitudes towards the land have traditionally been based on an agrarian economy: land was abundant and cheap; it was the frontier, requiring settlement; cleared and settled, its harvest was plentiful enough to support the new way of life sought by its tenants. Jefferson's statement, "this land permits us to support our people in prosperity, for the next thousand years," seemed to be valid.

Though land was cheap, it was a commodity to be bought and sold. As English real estate companies formed the basis for exploration of the New World, so did the colonial government encourage settlement and expansion in America, and provide revenues for itself by sale of land, at rock-bottom prices, with nearly unrestricted rights. The use or abuse of man's land was his own concern: it was his property.

The countryside was settled quickly, and the density of people increased. The promise of the Industrial Revolution of the late eighteenth and nineteenth centuries led large numbers to rapidly growing cities, especially as much land, marginal at best for farming,

became eroded, depleted and unproductive.

The new urban economy was not accompanied by a change in social attitudes. The city was the frontier, too, and a man's land was still his own to develop as he saw fit. But in the city, the higher density of development caused serious conflict, with incompatible uses on neighboring lands. A factory located next to a residential area; so called "nuisance" uses--warehouses, slaughter houses, garbage dumps, or closely-packed, poor factory workers--infiltrated the city, decreasing the value of neighboring high-value land. Pressure on local government--for "reasons of health and safety"--lead to the need for some control over land use--zoning regulations. Based on value of location and existing use, their function was chiefly to protect investment, not plan cities.

Local governments, empowered by their states, developed general zoning plans. Though techniques became more sophisticated, that sort of land use planning had remained dominant until the last decade.

Since the twenties, it became increasingly apparent that local zoning was ineffective or negative. Though it protected homogenous areas and land values for certain interests, it confined others: wealthy areas were barriers to social and economic mobility. Political expediency, not community goals, were often the basis for decision-making: decisions were short-run. Since planning was

seldom comprehensive or regional, but single-purposed--each set of decisions affected other sectors of the urban system, often in a non-supportive way. As the areal extent of urbanization increased, the multiplicity of jurisdictions and over-lapping districts created unresolvable conflicts because of uncoordinated decision-making.

At the same time, rapid urbanization required increasing amounts of land. The pressure of economic expansion and speculation caused prime agricultural land to be developed or removed from production. Often, government structure in these areas was insufficiently developed to control the expansion; or, perceiving the apparent wealth of urbanization, welcomed it; they developed floodplains, areas of geologic instability, stagnant water and air sheds.

Rural areas outside the limits of urban growth were not unaffected. Marginal land, eroded, depleted, mined land, was abandoned, as their tenants sought the prosperity of the city.

It becomes apparent, now, that land is a finite resource, not a commodity. If it is consumed, it is not renewable--depletion of the soil, erosion, bull-dozing, strip mining, dredge and fill are all examples of this. If instead, the land is utilized as a renewable resource, it can be conserved by wise management to benefit a wide range of public interest needs.¹

¹Department of the Interior, Office of Regional Planning, National Land Use Symposium, October, 1972.

The one thousand mile California coast is irrevocably interlocked with the California way of life. It is an immense segment of the national coast line, encompassing about the same distance as that from Boston to Savannah. About sixteen million people live within twenty miles of this coast, along the littoral between the coastal mountains and the sea. It is one of the most scenic, desirable, crowded, and disputed corridors on earth. About 60 percent of it is privately owned. There is public access to about one-fourth of the coast. The rest is federally owned, much of it by the military, with restricted access.

Passage of limited growth initiative legislation shocked big business and labor, the lending industry, and land developers, whose political war chest outweighed that of the environmentalists by twenty to one. It created a coastal commission and six regional subcommittees to rule on development permits within 1000 yards of the high-tide line and to submit to the 1976 legislature a master plan for the California coast from three miles at sea to five miles inland. No other state agency has as much autonomy as this commission, nor is any other given such broad powers over land use. The first steps of the commission have been tottering and some predict its downfall, but, modified and refined, it should suffice. No state or federal legislation has previously come to grips with environmental crises at so effective a working level. Illusions have been jarred all across

America; however, as in older societies, a sense of the limits of life has begun to pervade. This vagrant society discards and embraces at a reckless rate. It is doing so now, at a watershed in its brief history. The pretty culture must find shape and durability.²

Some important steps have been taken since our country began however, relative to attempts at land use. Some important dates in United States Land history are outlined in Table 1.

²Neil Morgan, "Running Out of Space," Harpers Magazine, September, 1973.

TABLE 1
SOME IMPORTANT DATES
IN UNITED STATES LAND HISTORY¹

<u>1785</u>	Land Ordinance established rectangular system of cadastral surveys of public land in Northwest Territory (north of Ohio River)
<u>1796</u>	Act of Congress provided for administration, survey, and sale of public lands in central part of Northwest Territory, surveyors being required to describe the nature of soil, water, vegetation, etc.
<u>1807</u>	Lead mines on public lands first leased by the federal government to private enterprises
<u>1828</u>	Senate resolution required land offices to estimate relative acreages of various classes of public lands not yet sold
<u>1832</u>	Hot Springs area in Arkansas was set aside by the Congress
<u>1849</u>	First grant of swamplands in the public domain for reclamation
<u>1862</u>	Act established the United States Department of Agriculture and directing the Commissioner of Agriculture to collect statistics
<u>1864</u>	Morrill Land Grant Act set aside land areas as supports for state universities
<u>1866</u>	Mining Act declared all mineral lands of the public domain open to exploration and occupation
<u>1873</u>	Timber Culture Act

Table 1 (Continued)

<u>1877</u>	Desert Land Act
<u>1878</u>	Timber and Stone Act
<u>1891</u>	Forest Reserve Act, which began national forest system
<u>1897</u>	Organic Administration Act of 1897
<u>1906</u>	Bureau of Forestry established in U.S. Department of Agriculture
<u>1907</u>	American Antiquities Act authorized national monuments on public lands
<u>1916</u>	National Park Service established in U.S. Department of the Interior
<u>1920</u>	Mineral Leasing Act
<u>1926</u>	General Reclamation Act
<u>1928</u>	Forest Research Act provided for making and keeping current a nation wide forest survey McSweeney-McNary Act
<u>1933</u>	Soil Erosion Service established in U.S. Department of Interior, transferred to U.S. Department of Agriculture two years later
<u>1935</u>	Soil Conservation Act
<u>1941</u>	National Resources Planning Board's Land Planning Committee issued report on Land Classification in the United States
<u>1948</u>	First major application of land use data in determining trip generating characteristics of land in the United States (Area Transportation Study)
<u>1949</u>	Housing Act established Urban Renewal Administration

Table 1 (Continued)

<u>1954</u>	Watershed Protection and Flood Prevention Act
<u>1958</u>	Outdoor Recreation Resources Review Commission established
<u>1960</u>	<u>Soil Classification: A Comprehensive System</u> published by U.S. Department of Agriculture
<u>1962</u>	Resource Development Economics Division established in Economic Research Service, U.S. Department of Agriculture
<u>1964</u>	Public Land Law Review Commission created Wilderness Act Land and Water Conservation Fund Act
<u>1968</u>	National Trails System Act Wild and Scenic Rivers Act
<u>1970</u>	National Environmental Policy Act Environmental Quality Improvement Act
<u>1974</u>	Forest and Rangelands Renewable Resources Planning Act

¹Marion Clawson and Charles L. Steward, Land Use Information, A Critical Survey of U. S. Statistics Including Possibilities for Greater Uniformity (Baltimore: The Johns Hopkins Press, 1965), pp. 181-184.

CHAPTER III
CONCEPTS ABOUT LAND

Land Using Activities

The United States has slightly less than 2.3 billion acres of land. Of this, twenty-one percent is in cropland, twenty-seven percent in pasture and rangeland, and thirty-two percent in forests (Table 2). Proportions of the national land base in these uses have remained nearly constant for more than two decades, although changes have occurred within regions. Urban uses have doubled in area since 1950, but their present area includes only 1.5 percent of the total land base.¹

The relatively simple-appearing idea of classifying land according to man's activities on it encounters many complications in practice. For one thing, in whatever manner the activities may be grouped or defined, a great deal of land--perhaps the overwhelming part of it--is not used for one activity alone, but for several, usually in different proportions. The uses which some observers would

¹Earl O. Heady and John F. Timmons, "U.S. Land Needs for Meeting Food and Fiber Demands," Journal of Soil and Water Conservation, January-February, 1975, p. 17.

TABLE 2

USE OF LAND IN THE UNITED STATES^a

Uses of Land	Millions of Acres in Each Use	Percentage of Land in Each Use
Cropland	472	20.9
Grassland pasture and rangeland	604	26.7
Forest land	723	31.9
Special uses of land ^b	178	7.8
Other land ^c	287	12.7
Total land	2,264	100.0

^aBased on 1969 U.S. Census data.

^bIncludes urban, highway, parks, wildlife, military, and farmstead uses.

^cIncludes land in desert, swamps, rock and tundra conditions.

classify as secondary may seem dominant to others with different interests.²

Perhaps a basic criticism of classifying land according to its utilization by man's activities is that this classifies the observable results and not the basic factors. It might be argued that the classifier is, or should be, more interested in those characteristics of land which lead to specific activities, or which might do so, than in the activities themselves. The latter are certainly influenced if not determined by a host of forces not localized to the land itself, and they change over time.³

²Clawson and Stewart, p. 14.

³Ibid., p. 15.

Natural Qualities of Land

The land planner must consider the natural qualities of the land, which to some degree are interrelated with current activities on the land, but to varying degrees may be apparently unrelated. It can be argued that the natural qualities of the land are more permanent and more likely to be pervasive over long periods of time, and thus somehow more basic than data on current land uses. On the other hand, the natural qualities of land are many, indeed, almost infinite of one includes variations in magnitudes as well as differences in character.⁴

In many circumstances, the vegetative cover of the land is a part of its natural qualities, in spite of its dependence upon man's activities. There is, therefore, a close relationship between natural qualities of land and the activities making use of the land, but this relationship is neither fixed nor invariable. This is true even for activities closely oriented to the natural qualities of land, such as forestry, and it is the more so when the chief determinant of activity is site or location and not other natural qualities of the land. For instance, a local park may be developed on a site that planners would consider far from ideal, simply because people demand conveniently located recreation areas, and no physically better area is available.

⁴Clawson and Stewart, p. 16.

⁵Ibid., p. 17.

Unfortunately, the term "conservation" suggests "hoarding," as if the idea were simply to ration static supplies so that there would be some left for the future. The aim of good conservation is to insure a continuous yield of useful plants, animals, and materials, by establishing a balanced cycle of harvest and renewal.

It is customary to divide natural resources into two categories: renewable and non-renewable. Although it is true that coal, iron, and oil deposits are not renewable in the same sense as forests or fish, however, nitrogen, iron and energy sources are renewable just as much as living resources. Man need never lack vital materials so long as the biogeochemical cycles operate in such a way that materials as well as organisms are "reassembled" as fast as they are dispersed.⁶

Improvements to Land

The heavy overuse of free goods is what biologist Garrett Hardin has called the "tragedy of the commons." The commons have been abused from time immemorial, and we have not gained the wisdom to avoid repeating the experience. Hardin gives the example of a rational herdsman using a common pasture, where his self-interest dictates that he add ever another animal to his

⁶Eugene P. Odum, Fundamentals of Ecology, (Philadelphia: W. B. Saunders Company, 1953), p. 317.

herd. Every herdsman is locked into a rationale dictating that he too expand his herd; and there is the tragedy: overuse of the commons. Each pursues his own self-interest, in the name of freedom, while bringing ruin to all.⁷

The tragedy of the commons is an example of the workings of the law of supply and demand. As long as the supply of the resource, like air or land, appears unlimited with respect to the demands of a small population, the resource may be treated as a "free good," that is, without cost for its use. Once the resource supply becomes limited in relation to the demands of a large population, then the resource must acquire a price or cost which equates the worth of an increment of the supply with the marginal utility for it. If this pricing system does not come into being, and if society persists in the delusion that the commons represents a free good for all, even in the face of overwhelming demand and dwindling supply, then the consequence is overuse of the commons and its ruin by despoliation.⁸

Intellectuals in general and urban researchers in particular have demonstrated a bias toward country over city values. In past times this bias reflected a conception of the natural environment as conducive to a moral and upright way of life. Nature was seen as

⁷Stahl Edmunds and John Letey, Environmental Administration (New York: McGraw-Hill Book Company, 1973), pp. 61-62.

⁸Ibid., p. 62.

somehow transcendent to the mundane experience of the city. Thoreau expressed this attitude in quasi-spiritual terms, Thomas Jefferson from a concern for civic virtues, and Theodore Roosevelt by arguing that the outdoor life was essential to the building of national character and virility.⁹ The wilderness, in particular, has become a setting where the clash of values concerning the use of the natural environment is most sharply focused. The artist-conservationist Alan Gussow sums up this point of view:

"Open space offers an opportunity for confrontation--not the confrontation of a new politics but a direct look into a system of which man is only a part. Open space--natural open space--offers the settings for the discovery that all things affect each other. As we inevitably become more humble, sensing that man is a part of nature, not versus nature, that we are indeed a part of a vast chain."¹⁰

Any consideration of land use rather quickly gets into the matter of improvements to the land. Land in a completely "natural" or unimproved state has very limited value to modern man under current practice. Inventories of activities and of improvements are often intermingled. For many kinds of usage, activity and improvements are directly related; in other similar improvements, or different improvements are made to provide for the same activities.¹¹

⁹William H. Ittelson, et al., An Introduction to Environmental Psychology, (New York: Holt, Rinehart and Winston, Inc., 1974), p. 244.

¹⁰Ibid., p. 321.

¹¹Clawson and Stewart, p. 20.

We must find ways of measuring society's demands for improving the quality of land and resources. The bafflingly unmeasurable must be made measurable. There are small beginnings today and much groping for answers, for it is clear that in the absence of acceptable measurements the debate will continue to produce more heat than light. Moreover, since funds will be appropriated and spent without greater guidance from any demand gauge, responsibility will remain above all with the resource manager, who must construe a demand schedule out of his own scale of preferences, and what he thinks ought to be other peoples preferences. He will get some help from the political process, but the process is clumsy especially when it comes to detail. Customarily, it permits choices only between approval and rejection, between yes and no. As a consequence decisions tend to be reached with little factual knowledge of the values that society as a whole puts on the results of the contemplated action.¹²

We should, therefore, plan ahead only so far as we can see with some degree of precision, and then readjust our plans at frequent intervals. We can be assured that there will never be enough facts available to give these plans any finality, and that we shall always be making judgments based upon probabilities.

¹²Michael Micklin, Population, Environment and Social Organization: Current Issues in Human Ecology, (Hinsdale, Illinois: The Dryden Press, 1973), p. 148.

The resource managers task is to spearhead man's response to human impacts on the land. To do this effectively requires readiness to accept great responsibility, to make decisions, to argue a case with those concerned--publicly if necessary--and to lead, persuade and inform.

Intensity of Land Use

Land is improved in order to be used more fully, or more intensively; and more intensive use usually requires improvements in order to be effective. In general, intensity of land use can be measured. It consists of either (1) greater annual inputs of labor, capital, other materials, and management per unit of area, or (2) great usage or output of product or services per unit of land surface.¹³

The development of resource management plans, however, requires more information about plant and animal ecosystems, economics, more detailed resource inventories, knowledge of the production capabilities of each parcel of land for each possible product, recognition of the degree to which different land uses are competitive, supplementary, or complementary. A great need exists for expanded research to provide this information.

Much of our current decision making processes relating to

¹³Clawson and Stewart, pp. 20-21.

resource management is in reality management by exception, whereby we only manage those areas which exceed our pre-set tolerance limits. The public objects only when our objective has somehow been violated. It is, therefore, necessary that we anticipate political expressions and incorporate them into our decision mechanisms by being responsive to public demands.

Knowledge of the many factors involved in any decision on land use is rarely available to the citizen. Often only the politician in power can have access to all the knowledge and possibilities on which to make value judgments and decisions. It is essential that the public become informed, aware of the issues, with attitudes and ideas based more fully on scientifically diagnosed fact.

There is a vast scope for improvement in the structure and content of central and local government. Administration, particularly, requires new attitudes and ideas. The social benefits to be derived from improving derelict and degraded land must be assessed, and the cost shared in an enlightened partnership between government authorities and commercial firms. This calls for administration capable of solving problems of land use intensity in a positive way, of bridging or eliminating the gaps between bureaucracy, technology and democracy, and of providing better intercommunication at all levels of society. Failure here leads to waste of the most vital resource--man's intellect. Progress is delayed, research and

studies are unnecessarily repeated, mistakes recur, because information is not spread effectively.¹⁴

Interrelations of Land Use

Through the past half-century the Nation's growth in population, its increase in industrialization, and the expansion of cities and suburbs have created a land-use crisis and made it impossible to ignore the need for the development of a National Land Use Policy. If the environment is to remain tolerable for people, we must intensify our efforts to plan for our future resource needs, and above all, for the use of land which is a vital basis for all resources. We can no longer accept the tenet that society benefits whenever and wherever there is any kind of growth; nor can we sustain the economic illusion that the more intensive the development, the better the community and society.

We can no longer treat land as if it were infinite; we know now that land is subject to the dimensions of quality and quantity. Yet the Nation's finite land base must continue to meet the total needs of the people. It must meet the increasing demands for food, clothing and shelter; it must provide for transportation, communication, industrial growth and employment opportunities. It must also

¹⁴Robert Orvill, Man and Environment (London: Penguin Books, Ltd., 1970), pp. 21-23.

produce the energy necessary for production, and for the convenience and health of a growing population.

In addition to all of this, the land must provide for the aesthetic needs of the individual. Open space for the spirit, vistas for the mind, and recreational opportunities for our leisure hours must come from the land.¹⁵

How do we measure land resource potentials? If we could confine ourselves simply to agriculture, we could make some intelligent estimates for this country based on what we know about the requirements of plants and about our climate, soils, and terrain. Land resource potentials are not fixed, but constantly changing.¹⁶

We have the further question whether the changing wants of people do not also change land use potentials. The tempo of change in satisfactions people want from life is increasing in this era of fast-changing technology and more widespread education. A manifestation is the increasing wants of people for land resources merely for space.¹⁷

Planning is the development of a program of ultimate objectives

¹⁵U.S. Department of the Interior, Conservation Yearbook Series, Number 8.

¹⁶C. P. Barnes, "Land Resource Potentials of the United States and World Regions," Modern Land Policy, (Urbana, Illinois: University of Illinois Press, 1960), p. 69.

¹⁷Ibid., p. 69.

and a schedule of operations to achieve the desired results. In the development and wise use of resources a clear statement of the objectives to be attained is essential to the execution of the plan.

Planning is not regimentation or may not be. In the United States democratic planning should emerge from community or national discussion of issues that require collective action. Planning should be continuous, or at least there should be a periodic review of previous plans so that obsolete objectives may be abandoned. It is essential that planning should be responsive to the will of the people.¹⁸

¹⁸Smith, G., Conservation of Natural Resources, (John Wiley and Sons, Inc., 1965).

CHAPTER IV

THE RESPONSIBILITY OF SOCIETY TO ITS RESOURCES

The Quality of Life

The extractive activities that have contributed to the deterioration of the natural environment have promoted in a significant way the growth of the national economy and the material well-being of human society. Without them, a modern industrial nation could not have developed. Today we have a large accumulation of capital and a level of living unparalleled in other cultures and previous periods.¹

Do we wish to continue to invest even more of our resources in meeting demands for more services, more classrooms, more hospitals, and more housing as population continues to grow? Or should we concentrate our energies and resources on improving the quality of existing services and extending them to large numbers of people for whom the "quality of life" still means getting a square meal?

We need to think in terms of what society, collectively, prefers for land use between different alternatives. If people were all alike,

¹Michlen, p. 148.

and if the preferences of each person were independent of each other, the representation of social preferences would be quite simple. Unfortunately, individuals are not all the same and peoples' preferences are not independent. Society has been collectively gulled into struggling on accumulating, destroying, innovating, to no intelligent purpose. The "goodies" proliferate, but society feels no better off.

Immediate concern must be with the revolution in thought and feeling that is necessary if men's aspirations toward the good life are ever to be realized.

Concern in the past about land use planning has been minimal, yet there appears to be an informal consensus that we should not only keep but improve the quality of life for ourselves, our children, and grandchildren.

Beyond that there is no consensus; there is little understanding of the long term effects that different rates and kinds of growth would have on the quality of life. There has been little concerted action toward adopting coordinated long range goals. There is no agreement on what mix of material goods and intangibles is needed for the highest attainable quality of life. Each person, each corporation, each governmental unit, each citizen's organization historically has pursued his or its own ends. The result has been unplanned,

uncoordinated, and uncontrolled growth. This kind of growth historically has produced in the United States a high material standard of living. But it also is increasingly yielding undesirable environmental results and causing conflict.²

It has been established that most, if not all, species of wild animals have instincts which usually tend to prevent overcrowding in their native habitat. They frequently thrive best at less than the maximum density which would be possible with the available food, shelter, etc. In other words, sustained carrying capacity estimates for different species of wildlife must recognize population density in addition to other constraints. There is growing evidence, but no conclusive proof and no consensus among experts, that similar principles apply to human society.³

There has been little scientific effort devoted to systematically identifying the elements that comprise an optimum quality of life. Yet if the people are to guide their future destiny, the ultimate goals must be described in both comprehensive and understandable terms. One way to come to grips with such a complicated problem is to propose a basic conceptual framework and subject it to review, revision, improvement, and refinement. Both the material elements

²Pacific Northwest River Basins Commission, Urban and Rural Lands Committee, Ecology and the Economy, July 1973, p. 1.

³Ibid., p. 2.

and the intangible elements are essential to the realization of the desired quality of life, but one of the greatest threats this nation faces is that the intangible values will be irretrievably destroyed during the pursuit of short term, material values. Indeed, the tragic evidence of such myopia is already apparent to too many parts of this nation.⁴

Capabilities of Response

Creating a desirable future in land planning demands more than foresight; it requires vision. Mankind's greatest achievements are the products of vision. Planning for the future demands an ecological attitude based on the assumption that man will continuously bring about evolutionary changes through the creative potentialities inherent in his biological nature.

We claim that human relationships and communion with nature are the ultimate sources of happiness and beauty. Yet we do not hesitate to spoil our surroundings and human associations for the sake of efficiency in acquiring power and wealth.

Aggressive behavior for money or for prestige, the destruction of scenic beauty and historic landmarks, the waste of natural resources, the threats to health created by thoughtless technology--all these characteristics contribute to the dehumanization of life. Society cannot be reformed by creating more wealth and power. Instead

⁴Ibid., p. 27.

economic and technologic considerations must be made subservient to the needs, attitudes, and aspirations that have woven into the fabric of man's nature during his evolutionary and historical development.

The most hopeful sign for the future is the attempt by the rebellious young to reject our social values. Their protests indicate that mankind is becoming disturbed by increasing dehumanization and so may act in time to reverse the trend.⁵

Mankind has a large reserve of potentialities that become expressed only when circumstances are favorable. Physical and social surroundings condition both the biological and the mental expressions of individuals. Environmental planning can thus play a key role in the realization of human potentialities. One can take it for granted that there is a better chance of converting these potentialities into reality when the environment provides a variety of stimulating experiences and opportunities, especially for the young.⁶

Life in the city is an endless round of obstacles, conflicts, inconveniences, and bureaucratic routine. The urban dweller is confronted daily with noise, litter, air pollution, and overcrowding.

⁵Rene Dubos, So Human An Animal (New York: Charles Schribner's Sons, 1968), p. 5.

⁶Ibid., p. 241.

Some of these conditions are pervasive. Others occur only at home, or at work, or in transit. Their incidence is profoundly disturbing, and many commentators on modern urban life allege that such conditions produce behavioral and physiological consequences inimical to the health and well being of man. The study of these consequences may be subsumed under the category of stress, which has been generally defined as the affective, behavioral, and physiological response to aversive stimuli.⁷

Man's adaptability is continually put to test; however, most people manage to survive without immediate psychological and organic breakdown. They adjust to the stressful aspects of their environment and become accustomed to them. But this ability to survive the inevitable stresses and strains of life is only part of the story. More important, perhaps, are the less immediate consequences of threats from the environment. Responses to a stressful event may become adapted to it, yet the adaption may take its toll. Immediate after effects may remain in the form of physical and mental diseases, psychosomatic disorders, performance and learning deficits and general social-emotional maladjustments.⁸

It should be made clear that stress and adaption to stress

⁷David C. Glass and Jerome E. Singer, Urban Stress, (New York: Academic Press, 1972), p. 6.

⁸Ibid., p. 10.

should not be regarded as having unequivocally adverse consequences. In an era when anything annoying is tagged with an unfavorable epithet, it is necessary to separate out the systematic effects of stress from the evaluation of its consequences.

It can be argued that stress is an unavoidable, even routine, component of each individual's existence. This assumption has been a dominant theme underlying the construct of motivation in Twentieth century American physiology and psychology.

Land use planning is an area in which people make decisions influencing the use and quality of their environment. What are the factors involved in this process? How are attitudes formed that lead to decisions? And who makes these decisions?

As part of the democratic process, land use planning is established through political channels. Occasionally, policy is the result of pressure on the part of the general public; more often, it comes from special interest or advocate groups such as the highway lobby or the Sierra Club; frequently, it is fostered by an appropriate agency, such as the U.S. Army Corps of Engineers.

In some instances, decisions will be implemented by a single individual--the ranger, let us say, of a State Forest. Policy administration, however, is usually in the hands of a commission. Such a group will be influenced not only by the nature of the environment that is being managed, but, theoretically, at least by

the attitudes of those who use the environment.⁹

At the center of our many controversies over land use planning are the attitudes of the people involved or affected by eminent land use decisions.

Here are some factors that contribute to the formation of attitudes on the part of the general public:

The Role of The "Expert"

In technological societies policy formation is largely institutionalized. From the soil conservationist to the city planner, from the forester to the engineer, control or modification of the environment is based on information supplied by the expert, who may also define the need for action out of his professional concern with particular land use problems.

Attempts to democratize this expertise vary in effectiveness, but in theory people are "clued in" at the point of impact through such procedures as public hearings. The purpose of such hearings is to reconcile broad public interest with local preferences. Imposed solutions by a public agency create distrust. The hearing itself may be window dressing for a policy already decided upon.¹⁰

⁹Ittelson, p. 330.

¹⁰Ibid., p. 332.

Most proposed land use changes are presented to the public as faits accomplis, or in the spirit that "the expert knows best." Lack of familiarity with complex problems among laymen, and the esteem in which the engineer, forester and scientist are held, fosters such an approach if it does not always provide a rationale for it. Solutions are perceived in very conventional terms, reflecting standard practices of the "profession" and an adherence to established government policy. In terms of role-perception, a degree of jealousy exists vis-a-vis the outsider. Expertise implies power, and there is little desire to share it with the public at large. Resource management operates largely as a closed system. This system must be made more responsive. Technical problems relative to land use planning must be viewed in a social context.

Planners, as do all others who create, express not only the general values and attitudes of their society, but their own unique personalities and their individual tastes and ways of looking at the world. To design or designate land use areas with purpose means to create a physical setting with one or several human specifications as primary, while others are considered secondary, or are taken for granted and not considered at all.¹¹

Too often, land planners mistakenly adopt a deterministic

¹¹Ibid., p. 342

position. They assume that the physical environment will be sufficiently powerful by itself to overcome the social and cultural characteristics of the users of these environments. Experience with urban renewal and the construction of major highways through central cities has indicated that these activities do fracture and fragment delicate social networks. But the effects of such physical changes must be interpreted in the light of the sociocultural characteristics of the users of various environments.¹²

¹²Ibid., pp. 348-349.

CHAPTER V
THE NEED TO RELATE PLANNING TO THE GOALS
OF OUR SOCIETY

Objectives of Policy

Because environmental and resource policies are inherently a public or collective goal, the forces which will determine the extent of their provision are political. Any discussion of national alternatives for resource policies must face up to the existence of political as well as economic constraints. The slow inertia and rigidity favoring the status quo in the public sector seem to come not so much from rigidities in specific programs and policies, but rather from a rigidity in the political process which programs must navigate before being implemented.

Despite a few notable exceptions, political inertia and a tendency to maintain the status quo are forces to be reckoned with when formulating policy. When unprecedented changes in approach to dealing with problems are attempted, negotiations among conflicting groups frequently break down. The fact that constraints are political and social rather than technological or physical in nature does not imply that they are any less real or binding.

In spite of past efforts to rally public support for adequate land use planning, resource and planning agencies are not in a position today to describe the total job of land use planning in the United States or to estimate what it would cost. In part this is because planning has been piecemeal, and there has been no consistent effort to frame planning objectives in relation to broader national aspirations. Public services have failed to keep pace with mushrooming private output. In large part, this has been so because the typical American has regarded government as a necessary evil and failed rather consistently to recognize the important role of government in any successful society.

As a consequence, urban blight, inadequate educational facilities, degrading poverty and deterioration of the environment are issues and problems we have to face. The kinds of values which cannot be listed in accounting ledgers have not received their proper share of attention in public policy formation. We have yet to develop a set of scales on which the financial, social, ethical and inspirational can be weighed together. Moreover, there is constant pressure to allow those values which can be measured more or less completely in dollars to dominate public agency decisions at the expense of those values which cannot be expressed in dollars and in some cases cannot be measured at all.

By and large, state and local governments have done little

planning and introduced little innovation. Most of the recent spurt of planning activity has been fostered and financially assisted by the federal government, for instance, through the workable programs. State, regional and local planning agencies have at least contributed to public education in the matter of planning needs and goals, although with a few exceptions their efforts have produced little tangible payoff.

What is essential to realize is that meaningful decisions about land use planning will influence patterns of land holding and development in critical ways, with implications for policy making that we are not yet ready to accept. Land use controls, and direct programs of governmental intervention, operate in a complex matrix of human, social and economic interactions to which we must respond.

We cannot shape new incentives and controls until we know what issues will receive attention at the national level. For the most part, those problems that require integrated national attention are the hard problems that we have managed to ignore. Our existing intergovernmental network should undergo continuous refinement to develop a policy making process in which federal agencies increasingly share responsibility, for major policies with regional, state and local counterparts.

Policy is most suppressive of innovation when it completely defines action and states exactly what is to be done. Policy is most frustrating to initiative when it is undeterminable and subject to

future definition and retroactive application. Policy is most antagonizing when it is imposed on a subordinate for the benefit of a superior. Policy is most confusing when it is internally inconsistent and provides no guide for resolving conflicting pressures.

Policy should allow freedom to innovate and should have the fewest restrictions compatible with the coordination needed to insure over-all system strength, stability and growth. Policy should be accessible, clear and not retroactive. The source of policy should be a process that ensures some consensus by those affected that it is a just compromise for the common good. Policies should be consistent by being designed as parts of a total policy structure that creates the desired dynamic behavior in the resulting system.

Some striking achievements are attributable to imaginative, even visionary goal-setting. Goals provide the direction to planning that is so essential in order to provide room for new information, new concepts, and innovations. Sources of new concepts and new information that will lead to widely accepted goals must include governmental units, nongovernmental sources, the infeeding of ideas from the public, business, research, academic institutions, and others.¹

Briefly, goals may be defined as a future state of affairs that a

¹Pacific Northwest River Basins Commission, p. 53.

person, organization, entity, or society in a geographic area is attempting to realize. They may be either explicit or implicit, or a combination of the two. Both plans and operating policies can be effectively measured against goals. Goals suggest or define the need for timely information. There is a strong relationship among problems, goals, policy, and information. Information is needed to confirm and define the need for action programs. Policy is needed to guide actions by which goals may be achieved. Problem descriptions help to identify the need for policy and plans. The lack of information identified the need for research. Goal setting is an integral step in an endless process yielding improved planning and management.²

It is pretty obvious that national growth is not of itself a panacea for man's woes, since it tends to create as many problems as it solves. One by-product of the industrial age has been a considerable fouling of the human environment. Another is the rapid exploitation and expenditure of cheap and available resources. A third is the development of critical social problems among the urbanized masses.³

A system of conservation based solely on economic self-interest is hopelessly lopsided. It tends to ignore, and thus eventually to

²Ibid., p. 54.

³P. Shepard and D. McKinley, The Subversive Science, Essays Toward an Ecology of Man, 1969. p. 5 .

eliminate, many elements in the land community that lack commercial value, but that are (as far as we know) essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock will function without the uneconomic parts.⁴

Problems of Land Resource Allocation

A growing population, rising real incomes per capita, and other factors have intensified the competition for the fixed area of land which our country contains. Land uses are changing in numerous and often complex ways, and further changes in the future seem certain.

In this dynamic situation, accurate, meaningful, current data on land use are essential. If public agencies and private organizations are to know what is happening, and are to make sound plans for their own future action, then reliable information is critical. But in the United States land use data has evolved gradually, piecemeal, to meet specific limited needs. They have often served those needs well. But no comprehensive system of collection, analysis, and publication of land use data has ever really been put into operation. There has not even been full agreement as to land use definitions and concepts. By and large, land use data for the United States is a

⁴Ibid., p. 408.

hodge-podge.⁵

Resource management in itself is a cultural reaction to the situation of the social group, since the group appraises the physical environment in which it lives and the technological assets at its command. Management of resources may have a variety of objectives, including maximum short-term output, maximum long-term output, stabilization of output, improvement of resource quality, creation of employment opportunities, or still other objectives.

It may seem as though the rapid growth of science should offset the upsurge of uncertainty in making resource decisions relative to these objectives. Science enables us not only to predict more accurately, but also to devise more ingenious schemes for hedging; so science alone cannot subdue uncertainty; science alone cannot suffice in decision making for resource management. Science has freed man of the need to be concerned about diminishing returns but has brought new problems in its wake. The capacity of scientific progress to create new problems for society, it appears, has outrun the capacity of social progress to solve them.

It is obvious that resource management policies will be productive and effective for society as a whole only if they make adequate provisions for a consideration of all elements of the public interest.

⁵Clawson and Stewart, p. 382.

And it should be equally obvious that resource management policies can only be effectively implemented by maintaining an on-going relationship with the public interest.

The appropriation of land to specific human uses is the most fundamental of all decisions relating to the environment, because this decision determines what a man may do with, on, and to the earth of which he is a part. Land appropriation and tenure practices go deep into history and are perhaps the most complex and deeply embedded nations we have. They are so deeply embedded that we seldom think profoundly about them.⁶

The American system of land ownership in fee simple absolute makes land easy to mortgage and freely salable, which treats land like any other commodity. The idea of trading land as a commodity would be almost inconceivable in other cultural settings, for instance, to the American Indian who looked at land as the root of his being to be used in common, to the Chinese who base their maternal system on familial land tenure. Here in the United States, the land developer and speculator can usually cajole, or occasionally bribe, a city council into giving him the zoning variances pretty much as he wishes. Zoning cases are the overwhelming business of many city councils, and council members soon learn the importance of placating most land

⁶Edmunds and Letey, pp. 38-39.

use demands in order to get re-elected. Land speculation in the United States is today almost as ubiquitous as it was a century ago, except now the harvest centers on zoning and land-use demands rather than upon public land sales.⁷

⁷Ibid., p. 42.

CHAPTER VI
LAND RESOURCE MANAGEMENT MEASURES

Important Land Use Legislation

Land use control generally has relied upon such established techniques as zoning, subdivision regulations and official maps. In many jurisdictions, building codes and master plans are part of the traditional control structure. But this control system has come under more and more criticism. Master plans lack dynamism, tending simply to be accumulation of small decisions concerning particular parcels and tracts for designated uses and not a projection of how space might best be organized to meet long-range community needs and to improve the quality of life. Attempts to regulate subdivisions, to schedule the pace and areas for development, to provide greenbelts to protect open spaces, and to preserve farm lands have not made much progress. Particularly unsuccessful have been efforts to shape patterns for development of open (often agricultural) lands.¹

¹Norman Wengert and Thomas Graham, "Transferable Development Rights and Land Use Control," Journal of Soil and Water Conservation, November-December, 1974, p. 254.

The difficulties with traditional controls fall into three categories:

1. Economic: It has been too expensive to use public funds to secure many urban land goals in the face of land booms and inflation.
2. Political: Complex issues revolve around the proper role of government and the levels at which government responsibility should be exercised. Legislative attempts to change the land use control system have created bitter controversies.
3. Legal and constitutional: The courts, until quite recently, have construed governmental powers to regulate land uses narrowly.²

For many years the federal government has had a pervasive influence on how land is used in this country. During discussions of proposed national land use policy legislation in the 92nd Congress, a list was prepared of about seventy-five major federal legislative enactments, policy statements, and government reorganizational efforts for the period 1944 to 1971 that related to land use. Within the executive branch, twenty-three federal departments and independent agencies were identified as having programs related to land use

²Ibid., p. 254.

policy and planning; 112 federal land-oriented programs were identified.³

If one considers as land use policy any program or action that has an effect on land use, then we have had many.

For the past few years, however, the debates in the Congress over national land use policy have focused on a particular type of policy. The basic social concerns that led to the legislative proposals were environmental, and environmental protection has been a major objective in all the major proposals. The proposals universally recognize the primacy of state authority under our constitutional system to control private land use. The approach is to provide federal grants to states that will encourage "process" reform and provide impetus for initiatives underway in some states to take back certain land use control authorities historically delegated to local governments. It has been characterized as federal enabling legislation to encourage states to exercise states' rights.⁴

While the focus of current federal bills is on procedure rather than substance, Congress may subsequently enact substantive national land use policies. For example, the Jackson Bill, as it passed the Senate, provided for a feasibility study of national land

³William D. Anderson, et al., "Perspectives on Agricultural Land Policy," Journal of Soil and Water Conservation, Jan. 1975.

⁴Ibid., p. 38.

use policies by the Council on Environmental Quality and specified twelve policies to be addressed. At the moment, Congress has not enacted national legislation, and discussion of the issues continues.⁵

Public interest in environmental quality and the use of natural resources is manifested in public discussions and pressures for action. Reacting to these discussions and pressures, local, state, and federal governments have been striving to articulate and ameliorate land use and environmental problems. According to the U. S. Senate Committee on Interior and Insular Affairs, over 200 land use policy measures were introduced in one or both houses of the 92nd Congress. Likewise, numerous land use measures have been introduced in state legislatures. The Council of State Governments reported that seven states have developed statewide land use plans and sixteen more states currently are developing some kind of a state land use plan.⁶

Within the past two years the National Governors Conference presented the states' view on the need for land use policy: "Across the nation, a failure to conduct sound land use planning has required public and private enterprise to delay, litigate, and cancel proposed public utility and widespread and commercial developments because

⁵Ibid., p. 38.

⁶Heady and Timmons, pp. 21-22.

of the unresolved land use questions, thereby causing an unnecessary waste of human and economic resources and a threat to public service, often resulting in decisions to locate utilities and industrial and commercial activities in the area of least public and political resistance, but without regard to relevant environmental and economic considerations."⁷

Widespread recognition of the need and support for the development of land use policies is evident. However, land use policy actions remain stymied, fluid, and in the process of formulation. As time passes and legislation is enacted, policy will become fixed, and options for guiding and shaping land use policy actions will likely diminish.⁸

Recognition that the day of choice is close at hand may be implied in a passage of the National Environmental Policy Act of 1969, Public Law 91-190, January 1, 1970. The act says in part:

"The Congress recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the

⁷Ibid., p. 22.

⁸Ibid., p. 22.

Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practical means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."

The act created the Council on Environmental Quality, which is charged with a policy role to examine all proposed legislation, new requests for funding by federal agencies, and executive orders for the purpose of ascertaining the following:

1. The environmental impact of the proposed action;
2. Any adverse environmental effects which cannot be avoided if the proposal is implemented;
3. Alternatives to the proposed action;
4. The relationship between local shortterm uses of man's environment and the maintenance and enhancement of longterm productivity;
5. Any irreversible and irretrievable commitments of resources which would ensue from the proposed action.

The newly created Council on Environmental Quality issued interim guidelines on April 30, 1970, which require federal agencies to submit environmental impact statements for new legislative proposals. For the most part, the guidelines restated the five

requirements listed above, with some amplification as to the meaning of the first point to be covered in terms of:

"The probable impact of the proposed action on the environment, including impact on ecological systems such as wildlife, fish and marine life. Both primary and secondary significant consequences for the environment should be included in the analysis. For example, the implications, if any, of the action for population distribution or concentration should be estimated and an assessment made of the effect of any possible change in population patterns upon the resource base, including land use, water, and public service, of the area in question."

These actions were followed by a message from the President to the Congress, on July 9, 1970, relative to Reorganization Plans Number 3 and 4, which created the Environmental Protection Agency, charged with responsibility for regulation or implementation of programs to improve environmental quality.

On August 17, 1974, the President signed Public Law 93-378 into being. This is known as the Forest and Rangeland Renewable Resources Planning Act of 1974. This Act is important because it directs the Secretary of Agriculture, through the Forest Service, to make and keep current a comprehensive survey and analysis of the present and prospective conditions of and requirements for the renewable resources of the forest and rangelands of the United States and of the supplies of such renewable resources, including a determination of the present and potential productivity of the land,

and of such other facts as may be necessary and useful in the determination of ways and means needed to balance the demand for supply of these renewable resources .

Provisions of the bill will encompass much more land than Forest Service land amounting to some 1.45 billion acres . In effect it will result in the compilation of an inventory of inventories-- a first major basis for compiling data so important for use in land use planning .

Essential Resource Planning and Management Functions

The critical determinant for the land use planner, in making a specific decision, is his perception of the design of the whole system . To the extent that he correctly perceives the purpose and state of the ecosystem, he can make a decision which is consistent with the whole . Otherwise, he inadvertently makes a segmented or suboptimal decision, which has as its consequence environmental degradation . In any new field, where social change is imminent, the rationale of decision making is perhaps more important than a specific decision, because the rationale is the analysis with which, by concurrence or controversy, a new life is forged . An analysis is, then, a story of the future, or what might be, which people can critique, revise, or embrace as a means of behavioral adaption and change . The content of analysis currently

in use usually contains:

1. A description of the present state of the system, which may also be called a definition of the problem. Since there are no problems without some normative judgments about what is better or worse, the analysis is also a preliminary statement of qualitative or ethical assumptions.
2. A description of the contingences of the future, or alternatives of what may be.
3. A statement of criteria by which to evaluate the alternatives.
4. An evaluation of the alternatives against the criteria.
5. A selection of the "best" alternatives according to the criteria: that is, which approach provides the most ideal solution to the users or beneficiaries.
6. An assessment of the state-of-the-art available to carry out the best alternatives, in other words, how feasible at what cost?
7. A definition of specific outputs and implementation plans to carry out the best alternatives.
8. A final summary statement of the worth of the proposed goals and decisions, which quantifies or epitomizes descriptly the criteria, the feasibility, the methodology, the benefits, costs and overall worth of the proposal in

the value scheme of the users.⁹

The present analysis method did not originate today, but has been used in technical evaluations for many years, since the "takeoff" of the industrial revolution in the Western world. In other words, we still operate under the preindustrial assumptions. Hence, our present analysis methods read of the past as well as of the present.

This analysis is not altogether appealing, especially to those who do not share equally in the economic gains, who desire a higher order of environmental quality, or who prize individuation. If this is, then, the case, upon what basis do we have to evaluate land use criteria?

One operational guide to decision making, in keeping with the nature of individual and ecological well-being, is what Oliver Johnson has called the principle of personal impartiality, which can also be stated: one ought never do an act having social or environmental consequences that discriminates among people (or species) on the basis of their individual differences alone. One difference, of course, is between the self and all others; and so the principle says that one ought not do an act having social costs or damage effects, consequences which benefit oneself alone, or one's group alone, or some group versus another group. Thus, we ought not purchase our own happiness,

⁹Edmunds and Letey, pp. 416-417.

even indirectly, at the expense of others. To discriminate against the well being of others, simply to act in favor of one's own happiness, is to act arbitrarily and unethically.¹⁰

A second guide to action may be called the principle of equal rights, which is to say that every person has an equal right to well-being. The justification for this principle is that well-being is a universal object of men's desires, since to be "well" and to "be" constitute life itself. As long as men affirm life, well-being will be its general object.

A third operational principle is that diversity should be prized and encouraged for itself, in the ecosystem or in the individual, because diversity in ecology is the means of adaptive survival, and diversity in the individual is his means of individuation and maturity.

What we have established, then, as criteria and measures of worth are environmental qualities and human perceptions which are observable and quantifiable, as well as being derived from operational principles consistent with moral philosophy. These measures of worth can be incorporated into a decision structure for land use planners, both as goals of the analysis in justifying the basis for the decision and/or objectives in a management system to establish control over operations.¹¹

¹⁰Ibid., p. 431.

¹¹Ibid., p. 433.

These principles are often forgotten or tossed into the background in our search for balance in decisions relative to land use planning so that we have a logical difficulty in determining who is making decisions. Groups are making decisions to solve land-use problems based upon their specialties, but how do they know what the problem (whole system) really is? Surely their specialties do not qualify them to see the whole system; rather they prevent them from doing so. The lens or perspective of their specialty causes them to focus on part of the system, the part they understand or at least recognize.¹²

A first priority in land-use planning is to try to expand the representation of the present institutions. This process of institutional change is undoubtedly long-term in its development, because it implies alteration of social rewards by legislation, persuasion and public opinions, which are conducive to a more comprehensive set of goals by corporations or public agencies. Existing institutions need to recognize that they serve a multiplicity of interests (of the whole system) rather than the pursuance of narrow or exclusive goals as in the past. The deterministic goals of productivity and economic growth, which have dominated the values and objectives of society in the past, are found to be wanting by a public which now has wider

¹²Ibid., p. 438.

aspirations. New deterministic goals now appear to be social-political objectives of an improved quality of life.¹³

Effectuating Policy

Since land-use planning measures are usually set by administrative hearing procedures, compromises are frequent with those who desire lenient standards for economic reasons. Our present public order perpetuates obsolete values and perceptions which are derived from economic want and insecurity of past generations. The development of powerful technologies has alleviated the economic need and poverty for most. But the values in the decision structure have not changed to encompass many new issues.

Today, in the face of population growth, environmental degradation, and technological complexity, legislative bodies delegate the responsibility for developing and controlling technologies to administrative agencies. The objectives of these administrative agencies frequently mix value and technique in a way which furthers the interests of those who support their programs, mainly the economic groups who benefit from the agency.¹⁴

The lack of an adequate public initiative and inquiry in administrative processes causes the responsibility for scrutinizing mixed

¹³Ibid., p. 440.

¹⁴Edmunds and Letey, pp. 491-492.

questions of value and technique to pass, by default, to interest groups who are not representative nor objective in making such judgments.¹⁵

Role of the Federal Government

The Federal Government has a substantial stake in land and natural resource planning. From a proprietary standpoint, the Federal Government is a very large landowner, owning approximately one-third of the nation's land. Congress sets the basic policy for management and administration of federal lands, and various federal agencies implement this policy for the lands within their respective jurisdictions.

Land use decisions are, in the first instance, properly local decisions, and just as local regulations should only be pre-empted by the State when there is a critical state concern, it seems that state and local controls over land use should be subjected to national supremacy only when a critical national concern so requires. All levels of government--federal, state and local--have important roles to play; but their respective planning and regulatory efforts will be fully effective only to the extent that they are coordinated in a manner that achieves formative results.

There is nothing novel in the observation that planning will be more effective if it is designed to produce a statewide plan which

¹⁵Ibid., p. 492.

will incorporate the various elements of the public interest within the state. Each state has developed, or is in the process of developing, a statewide plan for the use of water resources, and such planning is financed in part by the Water Resources Council, created by the Water Resources Planning Act of 1965. Similarly, statewide plans are being developed for outdoor recreation, funded in part from the Land and Water Conservation Fund act ministered by the Bureau of Outdoor Recreation. In addition, some states have provided for development of statewide land use plans, and various bills pending in Congress would stimulate the preparation of such plans by each state.

The essential ingredient now lacking is a coordination of these various plans so that the public interest in the conservation and use of land, water, and other natural resources can be weighed within a consolidated, fully integrated, comprehensive planning framework. Even where federal funds are now provided for various natural resource planning purposes, there is no federal requirement that such planning be coordinated. State legislation similarly fails to require such coordination. It is obvious that planning will be productive and effective only if it makes adequate provision for a consideration of all elements of the public interest. And it should be equally obvious that the public interest is best determined after hearing the views of all interested members of the public. This is essentially the "open

planning" concept, which holds that the planning process should be an open and public process, whereby members of the public will not only be apprised of what is going on at each planning stage, but will be afforded an opportunity to participate and express their views concerning the proper allocation of resources to various uses.¹⁶

¹⁶American Bar Association, Industrial Development and the Environment: Legal Reforms to Improve the Decision Making Process in Industrial Site Selection (Review draft), August, 1973.

CHAPTER VII

THE CHALLENGE TO IMPROVE UNDERSTANDING

The Uncertainty Of Conventional Wisdom

In matters of land use planning we tend to act only under the pressure of emergency. It took the tragedies of the dust bowls of the 1920's and 1930's to activate policies for the control of soil erosion. Communities are only now waking up to the dangers--which could have been predicted decades ago--arising from un-disciplined technology and population growth. The monstrous ugliness of our cities and highways is generating some concern for adequate planning policies. The scandal of the living conditions in the slums of large cities, for instance, entered into public consciousness only under the race riots. However, awareness of these problems does not seem sufficient to generate really effective control policies.

Any type of planning is commonly associated with political utopias and for this reason elicits skepticism and even hostile reactions. Utopias are no longer fashionable, in part as a result of the progressive erosion of the belief in rational progress, and more justifiably because of the awareness that static institutions cannot survive in a competitive world. Constructive alternatives

must be devised for land use planning based on better knowledge of the long-range effects that environmental factors exert on physical and mental health.

In land use planning, as in all aspects of life, we must learn to discover and accept the restraints inherent in man's nature and in the conditions of our times. Civilizations emerge from man's creative efforts to take advantage of the limitations imposed on his freedom by his own nature and by the character of the land.¹

Incentives for Philosophical Innovation

The complex philosophical issues associated with land use control are, to a large degree the crux of the problem. Distinctions need to be made between individual rights and social rights. Land planners cannot provide simple solutions for such ethical questions. They can, however, enumerate the effects of accepting one position over another. One sound ethical question holds that individual rights are supreme. Such a position permits the possibility of land use controls but leaves the choice to the individual or entity owning the land. A second ethical position is that permitting unrestrained land development may encroach upon the rights of others, particularly when resources are scarce. In this view, society, collectively,

¹Dubos, p. 208.

should make the ultimate decision as to the appropriate level of land use. Is the determination of land use too important to be left to unrestrained human behavior?

The appropriate measures of control will depend upon the ethical position adopted. The nature of control measures depends upon our ethical judgments. This is extremely difficult to accomplish.

The market mechanism does not everywhere provide entrepreneurs or resource owners with appropriate information in incentives to adopt actions that are socially optimal while still privately remunerative. Thus, there are imperfections in the way the market organizes land use production, and the government usually intervenes in particular situations to offset this deficiency. Thus, government must help to achieve collectively what cannot be attained individually. This involves, in part, the acquisition of greater knowledge in the natural as well as the behavioral sciences. Such knowledge would enable both private and public land managers to make more discriminating judgments about matters that might have adverse and irreversible consequences.²

The need for social and political innovation is becoming urgent for mankind. The relationship between man and his environment has to be thought through and restructured. No modern

²Michlen, p. 154.

institution appears to govern effectively anymore. The crisis of land use planning is, above all, an institutional crisis demanding institutional innovation.

Innovation is not a technical term. It is an economic and social term. Its criterion is not science or technology, but a change in the economic or social environment, a change in the behavior of people. Innovation creates new potential of action rather than new knowledge; it is not science or technology, but value. The measure of innovation is the impact on the environment.³ Innovative strategy aims at creating new concepts of what is value rather than satisfying existing value expectations a little better. Resistance to change has for many years been considered a central problem of land use management. It is incapable of being resolved as long as we talk of "resistance to change." The right way to define the problem so as to make it capable of resolution is as a challenge to create, build and maintain the innovative concept, the concept for which change is norm rather than the exception, and opportunity rather than threat. Innovation is, therefore, attitude and practices.⁴

Time Horizons

Planning is a function of government which is a creature of

³Peter F. Drucker, Management, Tasks, Responsibilities, Practices, (New York: Harper & Row, 1974), p. 788.

⁴Ibid., p. 797.

politics. The planning function of modern politics implies an integrated government with power to formulate and to carry out policy, subject to periodic electoral review and the possibility of being replaced by an alternative government. What the United States lacks is a sufficient coordination of powers.

By far the worst danger of planning is that it may become central to a totalitarian political religion. In their dissatisfaction with inherited faiths men slough off not only their souls but their sins and accept in their private worlds the possibility of ultimate perfection through the grace of psychiatry with no repressions, no compulsions, no abreactions, no aggressions, but only perfect adjustment in a blessedly permissive togetherness. In their public worlds this rejection and substitution may be paralleled by a faith in an earthly millennium in which all discords will succumb to planning.

Such tendencies are there, but even to mention them may be misleading. Our most urgent political danger does not arise from these relatively mild tendencies. It arises, rather, from our inability to provide a political base necessary for a strong, but accountable planning function.⁵

The power center of American politics has largely been

⁵Charles M. Hardin, Modern Land Policy (Urbana, Illinois: University of Illinois Press, 1969), p. 267.

made up of economic issues with noneconomic factors on the side-line. In an affluent society with a large body of well educated people, matters of human welfare and environmental betterment have become major political issues. This in turn could result in support for a better balanced and more adequate effort in land use planning.

As professionals or specialists in varied disciplines, we are necessarily concerned with the primary question of who prepares the plans. We are also very much concerned with the questions of plans prepared for whom and plans carried out by what means. Plans divorced from the means for action are of little value. They may be useful as illustrations of what might be, or as pilot guides for study, but their usefulness is decidedly limited unless they are harnessed to administration for action. The means for action rest primarily with the federal government and the states. Under our constitutional system the authorities required to undertake broad planning and action in development must be exercised by these basic government units.⁶

Despite all the attention that has been given the land resource policy problem in recent years, there remains a need for a fresh and objective study of the issues involved. The possibilities for making the type of study needed is restrained by a number of

⁶Ibid., p. 154.

institutional and attitude obstacles. Participation by representatives of resource management agencies would appear almost essential, in view of their experience and access to financial resources. Yet their participation raises difficulties in case of any conflicts between agency and public interests. Similar problems arise where non-government members of study groups represent geographic groups or special interests. Because of the fear of jeopardizing their tax status, research foundations have been hesitant to undertake studies of issues as controversial as those involved. State universities and agricultural colleges face similar problems, and like other research agencies, are confronted by budget restraints.⁷

These considerations would limit the types of agencies that are in a position to make impartial resource studies essentially free of restraints. One possibility would be an independent government resource research agency that was provided with adequate staff, time and access to resource management agency data. Another possibility might be a government contract with one or more of the large endowed universities. Success in exploring and clarifying issues in any case would require a combination of enlightened direction and competent staff.⁸

⁷Mark M. Regan, Modern Land Policy: Implementing Land Resource Policy, (Urbana, Illinois: University of Illinois Press, 1960) p. 282.

⁸Ibid., p. 282.

The most distinctive characteristic of our society is, and will become even more so, education. Within fifteen years, two-thirds of our population living in metropolitan areas will have attended college. Adult education is growing even faster, probably because of the rate of professional obsolescence. The Killian report showed that the average engineer requires further education only ten years after gaining his degree. It will become almost routine for the experienced physician, engineer and executive to go back to school for advanced training every two or three years. All of this education is not just "nice," it is necessary.⁹

⁹S. J. Carrol, Jr., The Management Process, (New York: The MacMillan Company, 1973), p. 384.

CHAPTER VIII

SUMMARY

The opportunities for better land use planning are staggering to the imagination. Regarding the natural environment we need less talk of crises and more hard work in planning in a deliberate and highly professional manner. We shall have to examine the natural environment and its several parts more comprehensively and systematically, looking further ahead, and paying more attention to the interrelations between that environment on the one hand and the cultural environment of research, technology, economic development and human welfare on the other hand. Land planners will have to be among the leaders in this examination.

Visions of what the future may bring, of creating a better life for all, of how to express these possibilities in plans that people can act on--these are the magnets which can draw the world forward. Here is where the land planners come into the picture. Finally, the people must have the will and capacity to act. In the natural resources field this means to press forward with research into new uses of raw materials; with conservation programs to prevent misuse; with education of professional managers and a redefining of our economic

values.

As issues concerning the management of the physical environment become increasingly national in character, we are pushed to find an appropriate means in which critical policies can be formulated, without denying the narrow approach that generally marks the local community and the bureaucratic structure. This will require an increasing sophistication in public administration which presently we do not possess.

Our thinking must be innovative and must go beyond the immediate preoccupation with locally vested interest in the prior solutions of isolated problems through restricted thinking bureaucracies. The knowledge with which we might make the correct decisions relative to land use planning is barely adequate. We can only hope that future man can discover a self-renewing vitality and concern to seek such innovative thinking and break loose from existing tyrannies of his mind.

Land planning should not be imposed on human organization but should grow out of an array of cultural and social needs. And only as these needs can be anticipated will the engineering achievements that we know are possible provide the behavioral fit that makes them worthwhile. Here we have a paradox: it is characteristic of all times that the technology of the age determines in large measure what these needs will be. Thus, the designer of future environments

is in the difficult position of projecting solutions to problems that his technology may create; unintentionally, he is supplying new difficulties as well as new answers. Above all, in this acceleration of technical mastery he may be thrusting man into the future before he is ready for it.¹

Yet perhaps the real danger facing mankind is not so much that the world will be overplanned, but that planning will be neglected--as in the past--in favor of expedient solutions. For many reasons man will probably cling to the qualities of his present world that have proved psychologically satisfying. However miraculous its tools, land planning is a habitat as well as a machine, a context for the participation and challenges, the diversity and personal meanings, the face-to-face and group relationships that transcend the utility of life and make it precious. For whatever its outward form, the future must enclose a world in which we recognize ourselves.²

1. We must realize that meaning, value, and purpose are what distinguish man from the rest of the biotic community. We must engage in a conscious and continuous dialogue on where we are heading, where we wish to go, and then attempt to so arrange our institutions as to make possible the latter. Only then can our institutions serve our basic needs.

¹Ittelson, p. 389.

²Ittelson, p. 391.

2. The life of modern man is bound up in economics and technology, but for each a new perspective seems called for if man is to be well served. With respect to economics, the cultural re-adjustment required in our thinking relative to land use planning will depend heavily on the wisdom of the economist.

With respect to technology, vast manipulations of the environment can result in unknown changes; it is thus imperative that we do our utmost as planners to avoid situations wherein sheer necessity compels the adoption of technological measures before their social and environmental impacts have been fully analyzed and thought out.

3. Superior land use planning is unlikely to be forthcoming in the absence of a framework more amenable to the nurturing of such plans.

It is a unique experience for us to have peacetime problems or technical problems which are not industrial problems, on such a scale. We do not know where to start, and there is no mechanism yet for generating ideas systematically or paying teams to turn them into successful solutions. Yes, there will be a need for money and power to overcome organizational difficulties and vested interests. But it is worth remembering that the only real source of power in the world is the gap between what is and what might be.³

³John Platt, What We Must Do, Science, Volume 166, November, 1969. pp. 1120-1121.

The only possible conclusion is a call to action. Who will commit himself to this kind of search for more ingenious and fundamental solutions? Who will begin to assemble the research teams and the funds? Who will begin to develop full-time interdisciplinary centers that will be necessary for testing designs and turning them into effective applications?⁴

⁴Ibid., p. 1121.

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