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Land Use Planning: An Institutional
Overview

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The environmental concerns of the 1970's have spawned an extensive institutional maze designed to achieve a multiplicity of environmental goals. Land use planning occupies an important but, unfortunately, ill-defined role within this configuration of institutions. It is ill-defined with reference to both what land use planning is and what it can accomplish. The result is a confusion, a misallocation of research resources and planning impotence.

Land use planning is ill-defined primarily because the relationships, powers and responsibilities of the many people involved in planning are changing rapidly (institutional change) and because there exists no theory of planning which adequately integrates the market and political aspects of land use decision making. Rapid institutional change makes it extremely difficult for analysts to maintain realistic and relevant perspectives. Similarly, the absence of a comprehensive theory of planning leaves analysts without an adequate basis for conceptualizing problems and selecting appropriate analytical concepts. This paper constitutes an attempt to improve understanding of what land use planning is and what it can accomplish by examining conceptual issues and reviewing current institutional trends. Attention is also given to assessing the reasons for institutional change and the significance of recent trends with reference to social welfare and research needs.

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CONCEPTUAL VIEW OF PLANNING

1 According to the conventional definition, planning is a public
2 decision making process involving the evaluation of land use alternatives
3 and the implementation of direct or indirect land use control programs.
4 This broad definition is widely accepted, but attempts to specify the
5 planning process in greater detail reveal vastly different perspectives
6 and are fraught with conceptual problems. Thus, it is necessary to
7 examine some of the major conceptual problems before presenting a more
8 detailed conceptual framework that can serve as a basis for discussing
9 planning institutions.

10 Perhaps the most significant problem is the persistent belief that
11 land use planning can be and ought to be comprehensive. Comprehensive-
12 ness calls for determining the land use pattern which maximizes social
13 welfare. Defined in this manner, comprehensive planning can be achieved
14 only if two conditions are met: (1) decision makers must thoroughly
15 understand the welfare implications of all land use outputs for all the
16 people involved and (2) analysts must be able to clearly specify the
17 production relationships between land and social outputs such as clean
18 air, clean water, efficient public utility systems, aesthetic enhance-
19 ment, etc. Neither of these conditions can be met at the present time
20 and thus comprehensiveness is and will probably remain an elusive
21 and impossible goal. ^{1/} The major consequence of attempting comprehen-
22 siveness is production of a document that achieves nothing. Planners
23 who attempt to do all things find themselves without the resources
24 to sell the public on any one of them, even though they may have
25 acquired the data to convince themselves.

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Another conceptual problem is the tendency to view land use
 1 patterns as an output or end in itself instead of an input or method
 2 of achieving desired social goals. When a given change in land use
 3 patterns is viewed as the desired objective instead of thinking in
 4 terms of what difference it makes to society if land is used differently,
 5 attention is diverted from the real purpose of planning. This leads
 6 to ignoring methods other than land use planning as the means for
 7 achieving desired ends. For example, property damages due to flooding
 8 can be reduced by land use planning actions which discourage develop-
 9 ment on flood plains, but perhaps retention dams could achieve the
 10 same end with a more desirable cost-benefit distribution.

11 A third conceptual problem results from failure to understand the
 12 meaning and/or importance of analytical institutional economics. A
 13 recent AAEA article by Seagraves illustrates both the confusion which
 14 surrounds the analysis of environmental institutions and the persistent
 15 tendency of many economists to succumb to the conservative bias which
 16 requires a positivistic approach and deemphasis of distributional
 17 issues. The appraisal of environmental institutions, of which land
 18 use planning institutions are a subset, demands an assessment of what
 19 difference it will make if the rules of the game are changed and who
 20 will be affected by the impacts (Schmid, Bromley and Randall). The
 21 focus on efficiency questions, which is so strongly advocated by
 22 economists with a conservative bias, begs the question of whose
 23 efficiency. The ideal land use pattern (highest value output per unit
 24 of input) may be quite different for poor, inner city residents than
 25 for rich suburban dwellers. Perhaps many land use plans continue to

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gather dust because they are designed by and for one group, planners
1 and community activists, but must be sold to the public at large.

2 The foregoing discussion only touches on the myraid of conceptual
3 problems associated with the land use planning process, but it does
4 provide a starting point for presenting a relatively detailed conceptual
5 perspective that is consistent with institutional reality.

6 Land use planning can be viewed as a process of establishing and
7 operating public institutions which modify the market allocation of
8 land consistent with the wishes of the people involved.^{2/} The process
9 begins when groups of individuals become dissatisfied with the existing
10 or projected market allocation of land resources and set out to change
11 the rules (establish planning institutions) in order to allocate land
12 resources in a manner more consistent with their wishes. The objective
13 is not to optimize the use of land (comprehensive planning), but to use
14 land use modifications as a means of achieving a narrow subset of social
15 goals. Once the rules of the game have been established, including
16 who makes the decisions, the distribution of power over land use,
17 provisions for citizen recourse and provisions for financing planning
18 efforts, the operational phase of planning begins. This phase consists
19 of analyzing what difference it will make if land is used in different
20 ways, selection of desired land uses, analysis of how land use patterns
21 will change with the implementation of control alternatives, and actual
22 implementation of control programs. More precisely, land use planning
23 can be thought of as a process of determining property right distribu-
24 tions at two levels. First, the rules of the game establish whose
25 preferences count. Secondly, property rights are changed to encourage

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land use patterns more consistent with the wishes of those whose preferences matter.

When land use planning is viewed in the above manner it permits perception of the process as but one means of achieving desired goals. It also facilitates recognition of the fact that the outcome of land use planning depends on the distribution of rights or liability rules, contrary to those who believe that optimum land use patterns could be determined, if only we had enough data. The importance of property rights means that any evaluation of planning performance must focus on how decisions vary with differences in institutional arrangements and on how successful a given institution is in achieving the objectives of those whose preferences matter. Planning performance can be evaluated with reference to the perspective of given publics, but the normative aspect of property rights makes it impossible to evaluate with reference to the total public interest.

CURRENT INSTITUTIONAL TRENDS

The current state of land use planning activity can usefully be divided into two components, input oriented and output oriented. Input oriented efforts include all planning institutions established for the express purpose of modifying land use patterns. Output oriented efforts include those institutions established to pursue an express purpose other than land use planning, but employ land use planning as one of several means for achieving their goals, (e.g., the Environmental Protection Agency).^{3/}

Since federal land use legislation succumbed to impeachment

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1 politics and the fears of the agricultural sector in 1974, the push to
2 establish input oriented planning institutions at a state level has
3 abated considerably. A review of Land Use Planning Reports reveals
4 that only one state, Wyoming, passed broad based input oriented land
5 use planning legislation during the past 18 months and that it is
6 being seriously considered in only one other, Michigan. County and
7 municipal programs are still being established, but such programs
8 continue to be almost exclusively dependent on zoning, a control
9 technique that is only marginally effective (Babcock, p. 123).

10 The real action in the land use planning arena appears increasingly
11 to involve output oriented efforts. Some of the more significant land
12 planning institutions include highway departments, fish and wildlife
13 bureaus, parks and recreation agencies, housing agencies and, last but
14 not least, the Environmental Protection Agency. All of these
15 institutions engage in land use planning as one means of achieving
16 their objectives.

17 Highway departments engage directly in land use planning when they
18 set out to determine highway routes and designate arterials. This pro-
19 cess involves analyzing the impact of highways on land use patterns.

20 Fish and wildlife, parks and recreation, and housing agencies are
21 involved in the management of agency owned lands and in the control of
22 lands owned by others as a means of insuring the availability of wild-
23 life habitat, recreation facilities and aesthetically pleasing housing,

24 The Environmental Protection Agency is involved in land use
25 planning in many ways and is emerging as the most important of all

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output oriented land planning institutions. The activities associated
1 with implementation of the Federal Air Quality Act (PL 91-604) and
2 Water Quality Act (PL 92-500) are perhaps the most important land
3 related EPA programs. Implementation of the Federal Air Quality Act
4 involves determination of where industrial and public facilities can
5 be located, which constitutes land use planning in its purest form.

6 The most significant water quality program, in terms of land use,
7 is section 208 of Public Law 92-500. Section 208, as recently inter-
8 preted by a U. S. District Court for the District of Columbia, requires
9 a state-wide program, which includes rural as well as urban areas.
10 Under draft guidelines issued by EPA, section 208 programs must, among
11 other things, "have accurate land use growth projections in order to
12 plan for adequate waste-water management facilities and anticipated
13 non-point source runoff." The guidelines essentially say that section
14 208 planning must examine, evaluate and make recommendations on the
15 existing land use regulatory system and land management practices,
16 particularly as they relate to non-point source control (Natural
17 Resources Commission, p.3).

18 This brief summary of what is currently transpiring in the land
19 use planning arena indicates that land use planning is occurring at an
20 increasingly intensive pace in rural as well as urban America. But,
21 the major programs are not the traditional land input oriented programs
22 with the multiple objectives and political decision making that is
23 usually envisioned in state or federal land use bills. Instead, land
24 use planning is being done by output oriented institutions where land
25 use decisions are made by bureaucrats and viewed as a means of

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achieving a single objective. Some of the reasons for this phenomenon
1 are perhaps obvious, but nevertheless it might be useful to explore them
2 before examining the policy and research implications of this changing
3 institutional scene.

4
5 FACTORS AFFECTING THE DEVELOPMENT
OF LAND USE INSTITUTIONS

6 Factors affecting the development of land use planning institutions
7 fall into two categories: those which create a demand for outputs
8 affected by land use patterns and those which influence the type of
9 institutions which emerge for the purpose of providing the outputs
10 demanded. Each category is discussed in turn below.

11 The land use planning outputs which have enjoyed the greatest
12 increase in demand are primarily environmental in character, e.g.,
13 preservation of open space, improved air and water quality, protection
14 of wildlife habitat and preservation of wilderness areas. The demand
15 for these environmental products has apparently increased due to
16 greater affluence, population pressures, improved knowledge regarding
17 the ecological implications of man's activities and changing life
18 styles. There is probably no question about the general validity of
19 these forces, but what is not well understood is the extent to which
20 such forces vary by geographical and social dimensions. To what
21 extent and for what reasons, for example, is the demand for environ-
22 mental products different in urban versus rural communities. Casual
23 observation indicates that the political pressures for environmental
24 products are greatest in the more affluent urbanized regions, but we
25 know precious little about why such differences exist. Are they due

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to different preferences (values) or to different levels of knowledge regarding ecological factors?

Analyses of public attitudes indicate that preferences or value differences explain some of the variance in demand than differences in knowledge (Comer, p. 40). If these preliminary results prove to be valid, a number of land use and other environmental programs are doomed to fail. Most notably, land use education efforts directed at making planning in rural areas politically acceptable are not likely to succeed if the public does not want what land use planning will provide, as opposed to not understanding what the outcomes will be.

The factors influencing the type of institutions being established to provide environmental outputs are more difficult to discern, but at least three plausible forces come to mind: (1) the relative ability of the public to identify with broad goals as opposed to techniques for achieving goals, (2) the fact that oblique changes in property rights are more politically acceptable than direct and obvious changes, and (3) the fact that politicians find it difficult both conceptually and politically to provide specific policy directions.

In this election year it appears to me to be particularly evident that the public identifies much more readily with goals than with techniques for achieving them. Much as Governor Carter finds it more persuasive to speak of goals, rather than of programs to achieve goals, the general public is more apt to support pristine water quality than they are to support land use planning, which is usually equated with zoning. If this phenomenon is as pervasive as it appears, it would come as no surprise when Congress adopts environmental goals that require land

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use planning to achieve, but turns down land use planning bills.

1 Much of the resistance to input oriented land use planning can be
2 attributed to the obvious changes in property rights which occur when
3 plans are implemented. Property rights are viewed by many lay people
4 as being absolute and inviolate such that any change threatens the very
5 foundations of the social structure. However, opposition to changing
6 property rights is intense only when changes are direct and obvious.
7 Perhaps this is due to the fact that you cannot oppose something unless
8 you recognize that it is occurring, or perhaps it is due to the fact that
9 property right changes are implicitly accepted when the resulting
10 outcomes clearly warrant it. In either case it is clear that oblique
11 property rights changes, such as giving a farmers neighbor the right
12 to be free of the dust associated with grain storage via an Air Quality
13 Act, are much more acceptable than a direct change such as zoning
14 cropland agricultural.

15 A third important factor contributing to development of output
16 oriented land use planning institutions is the difficulty of making
17 specific political decisions when the issues involved are extremely
18 complex and controversial. Politicians at all levels of government
19 cope with complexity by making broad policy decisions and assigning
20 to bureaucrats and to the courts the task of working out the details
21 and the conflicts. This phenomenon is evidenced quite clearly in
22 the evolution of environmental law. The National Environmental
23 Policy Act, the Water Quality Act and the Air Quality Act were all so
24 broad that no one knew what they meant until bureaucrats drafted
25 guidelines (administrative law) and the courts approved or disapproved

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such guidelines, given their view of congressional intent. If this
1 approach continues, and there does not appear to be a viable alternative,
2 input oriented land use planning efforts which call for detailed
3 political decision making are likely to remain insignificant.

4 The output oriented land use planning institutions which emerged
5 in recent years appear destined to continue their domination
6 of the land use planning arena, given the nature of the forces which
7 underlie such developments. Assuming this view is correct, several
8 critical social welfare and research issues merit attention.

9
10 SOCIAL WELFARE EFFECTS

11 What appears to be quite clear from the emerging pattern of land
12 use planning institutions is that market directed land use patterns
13 are being drastically modified, but not in the manner envisioned by
14 many advocates of land use planning. Instead of planning efforts which
15 seek to balance multiple objectives, the scene is being increasingly
16 dominated by single objective programs, e.g. water quality. Land use
17 decisions are being made by bureaucrats and the courts instead of by
18 the elected representatives of the people. Similarly, the emergence
19 of strong output oriented programs has successfully removed most of
20 the important decisions from the local control so strongly advocated
21 by many input oriented planners.

22 The principle welfare consequence of these developments appears
23 to me to be the danger that particular objectives will dominate to the
24 exclusion of others or, more broadly, the danger that many publics
25 will not be adequately represented as land use decisions are made. At

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the present time, for example, people concerned about air quality, water
1 quality, automobile transportation systems and the preservation of
2 historical sites, wilderness areas and wildlife are quite well represented
3 as contrasted to those publics who are interested in preservation of
4 agricultural land, in quality mass transit systems, in lower cost
5 housing and in efficient public utility systems. Perhaps what is needed
6 is an Agricultural Land Act, a Mass Transit Act, a Private Housing
7 Act and a Public Utilities Act comparable in impact to the Wilderness
8 Act, the Air Quality Act and the Federal Highway Act. One could then
9 permit the courts to adjudicate the increased conflicts which result,
10 or establish additional adjudicating bodies called something other
11 than land use planning boards.

12 In considering the social welfare effects of the evolving pattern
13 of land use planning institutions, it soon becomes clear that what has
14 been, is being or could be produced by alternative institutional
15 arrangements remains largely unknown. There exists little empirical
16 evidence to either refute or support deductive conclusions.

17 RESEARCH NEEDS

18
19 The increased emphasis on output oriented planning efforts calls
20 for quite different research programs than those currently being
21 emphasized by land use planning economists. Current research programs,
22 to the best of my knowledge, focus on: (1) property value effects of
23 public land use decisions; (2) the impact of incentive based policies
24 on land use patterns; (3) measurement of public land use preferences;
25 (4) development of land use data systems; (5) explanations for the

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spatial distribution of economic activity; and (6) identification of
prime agricultural lands. ^{4/}

Suggested changes in research priorities
are discussed below with reference to three major recommendations:

1. Additional research is needed on the outcomes associated with
different institutional arrangements.

With land use planning institutions in a rapid state of evolution,
it is imperative for society to closely examine what differences result
from alternative institutional arrangements. For example, what
differences are likely to result from decisions made by elected
officials, bureaucrats and judges? To what extent do land use decisions
which result from output oriented institutions differ from input oriented
pursuits? Does citizen participation in planning change decisions or
does it simply legitimize what would have been done anyway? Answers
to these and numerous related questions are essential if there is to
be any hope of anything more than random achievement of land use goals.

2. Additional research is needed on the relationships between
land use and quality of life variables.

At the present time little is known about the all important
relationships between land use and quality of life variables. Specific
examples which merit attention include: (1) the relationship between
a sprawled urban land use pattern and air quality; (2) the effect of
prohibiting urban development of agricultural land on the quantity,
quality and cost of available housing; and (3) the relationship between
use of inorganic compounds on cropland and the impact on potable water
supplies and water based recreation. Input oriented planning efforts
have often failed because they didn't consider relevant outputs and

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1 output oriented efforts can succeed only if asking output oriented
2 questions results in credible answers.

3 3. Increased emphasis should be placed on the efficient collection
4 of the types of data which influence land use decisions.

5 Perhaps the most serious malallocation of research resources occurs
6 with reference to the collection and analysis of data for all lands,
7 when it is relevant to decisions on only a small part of the total
8 acreage. For example, detailed data on the physical suitability of
9 soils for urban use is needed for areas where urban development is
10 likely, but is a waste of effort for areas where one can be quite
11 certain that urban development will not occur. A better more general
12 illustration might be land resource inventories. Most land resource
13 inventory systems call for collection of the same data for all lands
14 within a jurisdiction, despite the fact that land use changes occur
15 only on a small and predictable portion of the total land base.

16 Another malallocation occurs when researchers collect data and
17 analyze issues which they believe important, but which decision makers
18 chose to ignore. This factor is becoming increasingly important as
19 narrowly focused output oriented planning institutions increase in
20 prominence.

SUMMARY

21 This institutional overview reveals that land use planning must
22 be conceived of as a subcomprehensive public decision making process
23 that focuses on modifying land use patterns to produce desired outputs,
24 with decisions made on the basis of distributional impacts, not economic
25

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efficiency. When land use planning is conceived of in this broad context it becomes clear that the public decisions regarding land use are increasingly being made by output oriented planning institutions such as EPA and not by conventional planning commissions. Output oriented planning institutions can be expected to continue their rapid growth, due to the relative ability of the public to identify with specific instead of general goals; the fact that oblique changes in property rights are more acceptable than direct and obvious changes; and the fact that politicians find it increasingly difficult to make detailed resources use decisions such as those required with input oriented planning.

Current trends in the evolution of land use planning institutions mean that increasingly it is the bureaucrats and the courts instead of politicians who are making land use decisions, and that the distribution of power over land use is shifting from the local to state and federal governments. These developments pose an increased danger that particular planning objectives will dominate to the exclusion of others and that the divergent interests of different localities will not be adequately represented.

The high priority research needs associated with the changing institutional scene include evaluation of the outcomes associated with different institutional arrangements, and estimates of the relationships between land use and quality of life variables. In addition, research planning needs to involve a greater emphasis on determining the data and research results which are most relevant to the decision making process.

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FOOTNOTES

1 Raymond J. Supalla is Associate Professor of Agricultural Economics,
2 University of Nebraska, formerly with New Mexico State University,
3 Las Cruces, New Mexico.

4
5 *New Mexico Agricultural Experiment Station Journal Article No.

6 I gratefully acknowledge the helpful comments received from Dave Aiken,
7 Loyd D. Fischer, Paul Gessaman, Bruce Johnson and Duane Olson.

8 1. For a more complete treatment of why comprehensive land use
9 planning is an impossibility, with emphasis on the difficulties inherent
10 in the political process, see Libby, (pp.106-108).

11 2. It is useful to distinguish between land use planning and public
12 land management, where land use planning involves public controls over
13 private lands and public land management involves public decisions
14 regarding public lands. Public land management is essentially a
15 subset of land use planning where the market is rejected in favor of
16 public ownership as a means of land use control.

17 3. It is important to carefully distinguish between institutions which
18 engage in making decisions about land uses for the purpose of achieving
19 particular goals or outputs (output oriented planning) and those who
20 merely establish rules which incidentally influence land use. For
21 example, tax rules influence land use but the Internal Revenue Service
22 does not engage in land use deliberations. The Environmental Protection
23 Agency, in contrast, engages in both rule making and in deliberations
24 regarding desired land use patterns.

25 4. This summary of current research emphasis is based on published

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output and inferences which can be drawn from the work of the National
Task Force on Research Related to Land Use Planning and Policy.

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