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RESOURCE USE ISSUES
AND
THE PLANNING PROCESS

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FOREWORD

This publication represents a collection of papers which were presented before the Second Northeast Extension Seminar of The Northeast Regional Committees. The conference, which was held in Boston, October 11-13, 1966, explored the topic of "Resource Use Issues and the Planning Process."

The seminar was attended by professionals in rural and urban planning, economics, and sociology; landscape architects; educators, agricultural agents; and extension specialists in forestry and wildlife, area development, and public affairs.

Included in this publication are all papers which were presented before the four committees and those presented before the Northeast Regional Extension Public Policy Committee. They represent current thinking in the field of resource use and planning.

Much guidance and support was given by Henry M. Hansen of the University of Connecticut, and Joseph Ackerman and R. J. Hildreth of the Farm Foundation to the Boston Conference and the publication of the papers presented there. Financial costs were underwritten by the Farm Foundation and the Institute for Research on Land and Water Resources of The Pennsylvania State University.

Finally, we salute Jack Brown and Carroll D. Price, II who devoted many hours to the editing of this compilation of papers.

John C. Frey, Chairman
Northeast Regional
Extension Public
Policy Committee

INSTITUTIONAL FRAMEWORK FOR HANDLING LAND USE ISSUES
by Dean F. Tuthill¹

LAND USE PATTERNS

Before delving into specific Extension programs in Maryland involving land use issues, it may be well to take a brief overall look at land use in the "Free State" as a background to the variety of Extension programs in existence and needed.

Land use classification by major land cover is provided by a study of the State Planning Department of Maryland reported in June 1965.² The information presents existing 1960 land use and projected 1980 land use patterns in Maryland by acreage of cultivated farmland, woodland, tidal marsh, idle nonfarm land, and intensive urban-type development for each county and the state (Table 2). The data are condensed, rearranged and put in percentage form in Table 1.

The first two columns of Table 1 show the percentage of land in each county used for intensive urban development. This use includes land in cities, villages, and suburban built-up areas of more than 10 acres, including industrial sites, airports, railroad yards, institutions, highways and railroad rights-of-way. Federal military installations are not included. The remaining land use is cultivated land in farms, essentially cropland and pasture, all woodland both farm and non-farm, fresh and salt tidal marsh and idle nonfarm land, typically brush or weed covered, but occasionally rural residences. The counties are arranged in the order of declining intensive urban use in 1960

¹ Mr. Tuthill is associate professor of Agricultural Economics at the University of Maryland.

² State of Maryland Newsletter, Department of Planning Vol. XVIII-No. 6, June 1965.

Table 1. Actual (1960) and Projected (1980) Percentage Land Use Classes by Counties in Maryland

County	Intensive urban type development		Cultivated land in farms		All woodland		Other*	
	1960	1980	1960	1980	1960	1980	1960	1980
	-----Percent-----							
Baltimore	20.6	36.2	27.8	12.9	41.3	38.6	10.3	12.3
Prince George's	13.5	24.8	21.3	9.7	52.9	48.4	12.3	17.1
Montgomery	12.7	23.4	41.7	31.7	32.3	39.5	13.3	5.4
Anne Arundel	11.6	20.2	19.1	11.3	47.2	37.4	22.1	31.1
St. Mary's	5.5	8.9	25.6	19.2	67.2	68.1	1.7	3.8
Allegany	5.1	5.5	13.2	9.2	74.0	76.9	7.7	8.4
Washington	4.1	4.7	51.0	42.3	38.5	40.5	6.4	12.5
Howard	3.8	15.0	45.0	31.3	35.0	37.5	16.2	16.2
Harford	3.5	6.2	43.7	38.2	46.2	52.1	6.6	3.5
Carroll	2.8	3.8	62.4	51.8	26.5	25.8	8.3	18.6
Worcester	2.6	2.9	26.2	22.6	61.8	64.8	9.4	9.7
Frederick	2.6	3.3	60.2	56.5	37.2	40.0	0.0	.2
Talbot	2.2	2.8	56.4	55.9	27.4	27.9	14.0	13.4
Cecil	2.2	3.6	46.3	40.0	43.1	44.4	8.4	12.0
Wicomico	2.1	2.5	33.3	32.9	46.5	45.3	18.1	19.3
Caroline	2.0	2.0	51.7	48.8	40.0	39.0	6.3	10.2
Dorchester	1.9	2.2	25.9	24.3	42.8	40.4	29.4	33.1
Somerset	1.9	1.9	21.2	18.9	42.0	40.1	34.9	39.1
Charles	1.7	2.7	20.8	13.6	63.5	59.7	14.0	24.0
Queen Anne's	1.7	2.1	57.3	52.3	31.4	29.3	9.6	16.3
Kent	1.7	2.2	63.7	60.4	30.2	35.7	4.4	1.7
Calvert	1.4	2.1	29.3	21.4	65.7	64.4	3.6	12.1
Garrett	.7	.7	23.1	20.1	68.9	70.7	7.3	8.5
State	5.2	8.4	36.7	30.6	46.7	47.0	11.4	14.0

*Idle nonfarm land and tidal marsh.

These data illustrate the grouping in 1960 of Baltimore, Prince George's, Montgomery, and Anne Arundel counties in intensive urban use (12 to 20 percent of the area of the county). The rest of the counties drop to less than six percent intensive use. Cultivated farmland predominates in the majority of the counties on the Eastern Shore and in the Piedmont, including Washington County. Woodland occupies two-thirds or more of the two westernmost counties and of St. Mary's and Calvert counties in Southern Maryland. Charles County in Southern Maryland and Worcester County on the Eastern Shore have over 60 percent of their land area in forest. Prince George's County, surprisingly enough, has over half of its acreage in woodland. Woodland predominates in land use in Southern Maryland and the Eastern Shore because the important agricultural products, tobacco and broilers, respectively, are intensive though minor users of land.

URBAN LAND USE INCREASE

In 1980, the estimated land use pattern, based largely on population projections to this date, show an increase in intensive urban land use to 20 and 36 percent of the land area in the four urban counties. The relative position of these counties remains the same with each slightly less than doubled in intensive use. The remaining group of counties increased by moderate amounts in intensive use except for one striking change, that of Howard County. Here the percentage of intensive land use increases fourfold (to 15 percent) placing this county just below and among the intensive-use grouping.

The Howard County projection was based on the creation of a new city of an estimated 100,000 people -- Columbia.* This proposed city started construction in September 1966 and will eventually occupy some 170 farms and 15,100 acres. This unique plan of a private developer includes a cluster of village complexes each having a community center, with traditional services, education, shopping, recreation, and worship.

* The population projections for the surrounding counties were modified to allow for the sharp increase in Howard County.

Among the village complexes will be open space, lakes, and industry. Living units will vary from single to multiple unit dwellings. This development may well be a model for the future.

The remaining counties are still in the two to six percent range of [expected] intensive use in 1980, except for St. Mary's County with 8.9 percent. The increase in intensive use comes mainly from agricultural land, as dramatically illustrated in Howard County. Woodland area remains nearly the same for most counties and increases in several, mainly the more heavily forested ones. Surprisingly, however, a sizable increase (of 7.2 percent) is projected for Montgomery County. This phenomenon is quite common in urbanizing areas. Not all of the land going out of farms moves immediately into urban use; some reverts to brush or woods for a period of time. This emphasizes the fact that 64 to 80 percent of even the intensive urban counties will still be farm land, woodland and/or other in 1980.

There remains ample living space even in these counties for many years in the future. Rural poverty problems still exist in Montgomery County, one of the highest per capita income counties in the country. For the state of Maryland, overall, woodland predominates less than half of the land area, cultivated farm land about a third, and intensive urban development in less than 10 percent, even in [the projection for] 1980.

PROBLEMS OF URBAN USE

This brief look at land-use patterns and projections helps focus the emphasis needed for Extension programs. Problems of urban use of land cannot be neglected; urbanization is a growing, demanding force even if not as pervasive as sometimes pictured or imagined. Institutional arrangements for land use in rapidly growing areas must be developed and adapted to the greater concentration of people. Can cities provide the needed services for urban dwellers? Can county governments provide for the expanding suburbs? Can recreation, green space, industry that will not pollute the water and air, commercial establishments, and attractive and liveable residential areas be provided? Can the large amount of

space not yet used intensively be developed soundly, constructively and with a minimum waste of space? Can the natural resources, including (and perhaps especially) water, be protected from misuse, and can the optimum use of these resources, both now and in the future, be accomplished? Is the institutional framework of the city or the county equal to the task? It seems questionable.

These problems indicate the need for a broader institutional framework for land-use control than that of the city or county. The State Planning Department in Maryland is making an intensive study of the state's resources. Much planning is being done at the state level, but little implementation is possible, at least through the time-tested method of zoning regulations and ordinances. The "spending power" of the federal and state governments is directed toward desirable land use objectives, but this may not be enough to implement comprehensive plans and designs. A recent Fortune magazine article states:

"...states are beginning to shape growth patterns ..., most significantly by a new kind of regional zoning. The power to control land use originally belonged to the states anyway, but decades ago, says Professor Jacob H. Beuscher of the University of Wisconsin, a leading authority on zoning law, they 'almost completely abdicated' by delegating zoning to local government. Recently, they have been taking some of the power back." ¹

The article goes on to mention that Connecticut regulates construction on flood plains of some rivers and streams and that Massachusetts enacted a law giving the state the right to prohibit seacoast construction. Hawaii, in 1961, went the furthest of any state with a state-wide zoning law to prevent suburban growth on steep mountain slopes or on important agricultural lands. ²

¹ Edmund K. Faltermayer, "We Can Cope With the Coming Suburban Explosion," Fortune, September 1966, p. 147.

² Act No. 187 of 1961, Section One, "Findings and Declarations."
"Therefore, the Legislature finds that in order to preserve, protect and encourage the development of the lands in the State for those uses to which they are best suited for the public welfare and to create a complementary assessment basis according to the contribution of the lands in those uses to which they are best suited, the power to zone should be exercised by the State and the methods of real property assessment should encourage rather than penalize those who would develop these uses." Myron C. Thompson, "Hawaii's State Land Use Law," State Government, (The Council of State Governments), Spring, 1966, p. 97.

State zoning would be a logical next step for the mainland states to follow to put teeth in state-wide comprehensive development plans. At least the framework could be formed within which local zoning could be more effective.

URBAN SEDIMENT

Urbanization and suburban sprawl require a reoriented Extension program, to help form institutions that can most effectively guide urban land use and development. In Maryland, a series of Extension-sponsored Land Use Seminars was begun to emphasize urban land-use problems and to involve agencies which are or should be working together on these problems. The first in this series, jointly sponsored by the Interstate Commission of the Potomac River Basin, the University Cooperative Extension Service, and the Metropolitan Washington Council of Governments, was on "Urban Sediment Can Be Controlled." This meeting itself, involving three sponsoring agencies, brought together the forces of four states, Virginia, Maryland, West Virginia and Pennsylvania, and the District of Columbia and the federal government to work on pollution of the Potomac River. Such compacts involving several states and regions are necessary to provide the power to direct land and water resource use of the major river basins.

The emphasis of the seminar was on soil erosion, but the concern was not with the loss of soil, but what to do with it after its loss. Subdivisions, as they break ground for massive housing developments, create siltation problems of immense proportions in the reservoirs of watershed projects and in other bodies of water, particularly the estuary of the Potomac. Two and one-half million tons of silt are deposited in the estuary a year; in the transport of the sediment, the microbiological waste decomposition process of the river is seriously retarded.*

* The Corps of Engineers spends nearly \$1.5 million annually dredging sediment from the estuary. Thirty-two percent of the total sediment load comes from the Washington metropolitan area, about four percent areawise of the Potomac basin. David G. Sobers, "The Implications of Sediment Pollution on Water Recreation in the Upper Potomac Estuary," unpublished master's thesis, University of Maryland, September 1965.

A sediment control program, which would require the subdivision developer to adopt adequate sediment control measures, was recommended for adoption by the county governments. These would include sediment basins where silt would settle rather than run off.

Dr. Frederick P. Miller, Extension Soil and Water Resource Specialist at the University of Maryland, the Soil Conservation Service, and the county planning and zoning commissions have provided support for such legislation in Montgomery County. Regulations are being considered in Prince George's and Baltimore counties. Dr. Miller is currently making a feasibility study in Washington County on the seriousness of the sedimentation problem.

LAND DEVELOPMENT

The second seminar, "Land Development in Suburban Growth," was aimed at county and municipal planning and zoning boards. This conference emphasized the need for goals and policy in planning, adequate yet flexible zoning regulations for suburban growth, and utilizing soil information in locating public buildings and housing subdivisions. Columbia was presented as the planned city of the future, with the emphasis on flexible and multiple land use within the city.

These two programs emphasized problems encountered in urban growth, but the rest of the state, and even the larger part of the urban counties, cannot be neglected. Matters of declining populations, water and sewer systems, education, and many others of the rural areas must be dealt with. To this end, the three counties of Southern Maryland, Charles, Calvert and St. Mary's, have formed a Tri-County Council. This group has no direct political power or authority, but the collective political power of the County Boards of Commissioners, state delegates and senators of the area, and the Economic Development Committees are represented, and they consider problems on a regional basis.

A conference sponsored by the Soil Conservation Districts and the Extension Service of the Tri-County area examined the difficulties of a one-crop agricultural economy (with the market for Maryland leaf declining)

and a traditional conservative people with a flavor of the "old south," having a per capita income in 1960 of \$1,592 (only two-thirds that of the state average).

The recommendations of one regional development economist were to strengthen state and federal programs in education, health and welfare, to preserve cultural and historic structures and sites -- presumably for visitors if they are well behaved -- and to protect and improve the quality of the natural resources; industrialization should not be encouraged, and positive steps should not be made to bring people in, they create more problems of water pollution and sewage disposal than they are worth, and residential housing density should be kept low. In short, if the goal is, as John Cumberland states, "a better life for people in the region, then it becomes clear that we are concerned more with quality and less with rates of growth, construction of physical facilities, attraction of new industry, etc.)* Nevertheless, people are coming into the area in increasing numbers (note St. Mary's expected growth), and the Tri-County Council may help create the institutional framework to meet regional problems with a regional structure and viewpoint.

REGIONAL APPROACH

The Eastern Shore of Maryland has been in the process of forming a Delmarva Economic Development District. This interstate effort has involved the municipal, county, and state governments of Delaware, Virginia and Maryland. The combined resources of the region have been assessed, and an Overall Economic Development Plan in pending final approval. Implementation of the plan should help this peninsula to realize more nearly its economic and industrial potential.

In the predominately tidal marsh areas of the Maryland Eastern Shore, Public Drainage Associations have been formed or reactivated, with the stimulation of Public Law 566 funds, to improve drainage and flood

* John H. Cumberland, "Southern Maryland Development Objectives," paper prepared for the Southern Maryland Resources Conference, May 10, 1966.

TABLE 2. Actual (1960) and projected (1980) acreage in major land cover classes, by county (excluding Baltimore City), Maryland (Source: Department of Planning Newsletter, Vol. XVIII--No. 6, June, 1965)

COUNTY	Cultivated	All	(Farm	(Non-	Tidal	Idle	All	Intensive	Total
	land in	wood-	wood-	farm	marsh	non-	open	urban-	land
	farms	land	land)	wood-		farm	land*	type de-	area
	(1)	(2)		land)	(3)	land		velopment	
						(4)		(5)	
	1960/1980/a								
	----- (in thousands of acres) -----								
Allegany	36/25	202/210	56/40	146/170	--/--	21/23	259/258	14/15	273
Anne Arundel	51/30	126/100	24/10	102/90	2/2	57/81	236/213	31/54	267
Baltimore	108/50	161/150	31/15	130/135	4/3	36/45	309/248	80/141	389
Calvert	41/30	92/90	38/35	54/55	4/3	1/14	138/137	2/3	140
Caroline	106/100	82/80	46/40	36/40	3/3	10/18	201/201	4/4	205
Carroll	181/150	77/75	31/20	46/55	--/--	24/54	282/279	8/11	290
Cecil	104/90	97/100	28/20	69/80	4/4	15/23	220/217	5/8	225
Charles	61/40	186/175	74/60	112/115	6/5	35/65	288/285	5/8	293
Dorchester	96/90	159/150	50/40	109/110	102/105	7/18	364/363	7/8	371
Frederick	259/240	158/170	41/30	117/140	--/--	--/1	417/411	11/14	425/b
Garrett	98/85	292/300	93/85	199/215	--/--	31/36	421/421	3/3	424
Harford	126/110	133/150	33/20	100/130	8/8	11/2	278/270	10/18	288
Howard	72/50	56/60	18/10	38/50	--/--	26/26	154/136	6/24	160
Kent	116/110	55/65	24/20	31/45	4/3	4/--	179/178	3/4	182
Montgomery	132/100	102/125	30/15	72/110	--/--	42/17	276/242	40/74	316
Prince George's	66/30	164/150	46/25	118/125	3/2	35/51	268/233	42/77	310
Queen Anne's	137/125	75/70	37/30	38/40	6/6	17/33	235/234	4/5	239
St. Mary's	60/45	158/160	59/45	99/115	3/3	1/6	222/214	13/21	235
Somerset	45/40	89/85	30/20	59/65	56/55	18/28	208/208	4/4	212
Talbot	101/100	49/50	30/25	19/25	6/6	19/18	175/174	4/5	179
Washington	151/125	114/120	32/25	82/95	--/--	19/37	284/282	12/14	296
Wicomico	81/80	113/110	41/30	72/80	15/15	29/32	238/237	5/6	243
Worcester	81/70	191/200	59/40	132/160	22/20	7/10	301/300	8/9	309
TOTAL	2309/1915	2931/2945	951/700	1980/2245	248/243	462/638	5940/5741	321/530	6271

* Sum of columns (1), (2), (3), and (4).

/a The actual 1960 acreage is shown to the left of the diagonal line, the projected 1980 acreage to the right.

/b The sum of columns (1), (2), (3), (4), and (5) for 1960 slightly exceed the total land area of Frederick County in part because idle nonfarm land and intensive urban-type development were derived independently from the other classes. The discrepancy also is due to rounding procedures.

control on many thousand acres of land. Two hundred and twenty-six such associations are now in existence. One example, the Aydelotte Public Drainage Association, benefits 12,000 acres, has 65 miles of main and tributary ditches, and includes 869 parcels of land owned by 611 taxable landowners.

These programs involving land-use issues, sponsored or closely supported by the Maryland Cooperative Extension Service, illustrate attempts to promote orderly land development in urbanizing areas, to cooperate on an interagency, interregional and even interstate basis on land-use issues, and to consider land-use problems of the low income rural areas. As the man-land ratio increases and man's living pattern becomes more concentrated in urban areas, land use becomes a vital public issue needing the best possible education that Extension programs can provide.