Greenspace

Comparative Perspectives on Regional Sustainability

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Perspectives from Great Britain, the Netherlands, and the United States

An important function of government is to develop land management plans. Land is a finite resource and must be managed in a way that balances both the present and future needs of citizens. Responsible local planning boards also will seek to manage land in a way that provides the most extensive benefits to a range of regional interests.

Comprehensive plans for managing regional development are found in many parts of the world. A common element in many of these plans is the retention of a system of greenspace that helps to ensure a continuum from a low-density rural periphery to a high-density urban core. The goal of a greenspace system is not merely to provide a sufficient amount of parks, recreational fields, and trails in a metropolitan area. Such a system also plays a major role in shaping development patterns throughout the region.

By developing a comprehensive system of parks and trails, local planners can enable the greenspaces of a region to serve as a boundary between urban and rural areas, and can steer new development away from the urban fringe. By channel-

ing development to centrally located areas, existing communities can gain convenient access both to urban amenities, such as employment, transportation, education, and culture, and to rural amenities, such as agricultural, scenic, recreational, and natural resources.

The Benefits

Regional greenspace planning provides many benefits to local areas. In terms of the natural environment, greenspaces ensure the preservation of significant areas for the preservation of wildlife habitats, as well as for the enjoyment of residents. Among the benefits of greenspaces are the following:

- Natural features like hillsides, wetlands, and waterfronts may be protected.
- Ecosystems containing local plants and animals may be preserved.
- Farm products, including fresh dairy products, fruits, and vegetables, will remain readily available to urban markets.
- Recreational amenities close to major population centers may be expanded. The development pattern of a metropolitan area will be more compact than it would be under typical planning and zoning guidelines because greenspace channels new development to areas capable of sustaining increased population and employment growth.
- Existing communities will attract residents who want recreational amenities nearby.
- Infrastructure and transit services will be more efficient because development is more centralized.
- Residential and commercial reinvestment in older areas will enhance the quality of life in urban centers.
- And greater attention to the location, use, and design of development projects will enhance community identity.

Local governments that work cooperatively to develop open space systems may shape the location and timing of development to ultimately reap the benefits of a regional pattern in which urban, suburban, and rural components are distinct, identifiable, and sustainable.

The main focuses of this article are policies and case studies related to the growth management tools known as *greenbelts* (minimally developed lands that encircle an urbanized region) and *green areas* (areas or groups of areas of minimally developed lands that help in retaining large-scale nonurban uses adjacent to urbanized regions). The term greenspace encompasses both greenbelts and green areas.

Two European regions in which population density resembles that of the densely populated northeastern region of the United States can offer useful models for greenspace planning on this side of the Atlantic. In Great Britain, planning of metropolitan regions is complemented by the existence of greenbelts, while in the Netherlands, an area known as the *greenheart* amid a number of metropolitan areas acts to retain minimally developed lands where they would otherwise succumb to development pressures.

Despite variations in how these different kinds of greenspaces may appear on regional maps, their effects in steering development to sites that benefit the broadest regional interest are all laudable ones. And local government officials who work cooperatively to develop comprehensive systems of greenspaces for urban regions will find themselves well positioned to meet modern quality-of-life and sustainability goals.

Greenspace plans feature numerous benefits for managing the growth of urban regions, including:

- Efficient allocation of public infrastructure.
- Preservation of open space resources.
- Reinvestment in central cities.

The successful management of these resources is intimately linked both with the quality of life of current users and with the probability that the region will retain a sufficiently high standard of resources to meet future demands.

Figure 1. Conceptual diagram of urban growth as modified by the development of mass transportation, with the later filling-in of areas not accessible to mass transportation.

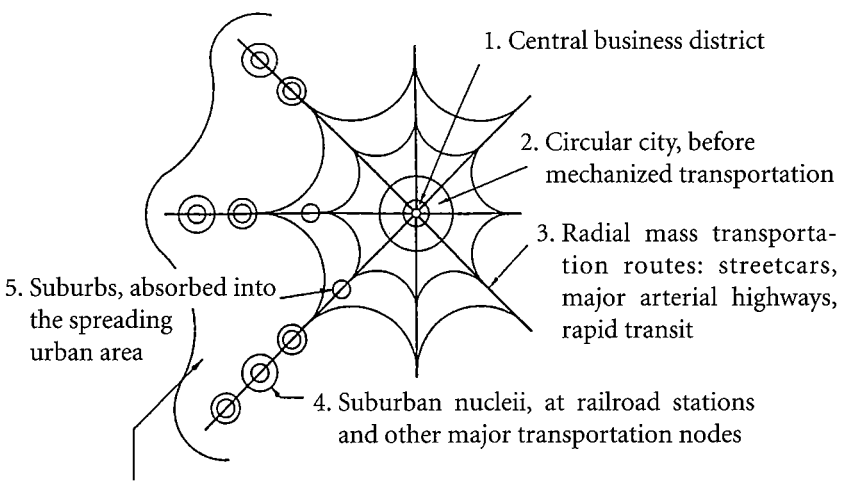
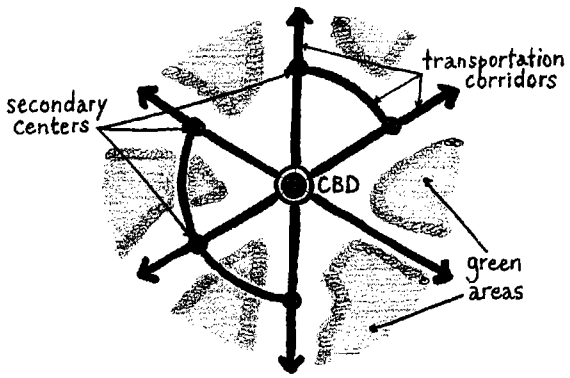


Figure 2. Conceptual diagram of a metropolitan area based on corridor-oriented development with green areas.



—Focus is on the central business district (CBD).
—Circulation among corridors is limited by green areas.
—Access among corridors cuts through wide parts of the greenspace.
—Transportation and utility corridors all have the same level of importance.

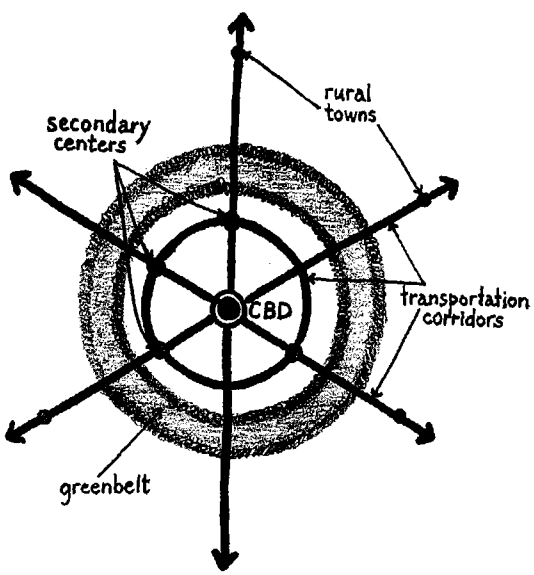
Efficient Allocation of Public Infrastructure

Investments in regional transportation and infrastructure policies are recognized as important elements in shaping the patterns of regional growth because they help to differentiate between areas of development and nondevelopment. Figure 1 illustrates the stages of regional growth that have resulted from the evolution of various modes of transportation since the late 19th century. (The last stage involves the filling-in of areas among radial routes accessible only by automobile.) Figure 2 shows the regional pattern created by this type of development: a focus on the central business district (CBD), poor circulation among non-CBD centers, and the lack of a comprehensive system of open space.

In contrast to the pattern of development resulting from the transportation-focused concept of urban growth, Figure 3 illustrates a concept of urban growth that has been generated through one specific type of comprehensive greenspace planning, known as greenbelt planning. The primary benefit of greenbelts is the preservation of a ring of open space at the urban/rural fringe.

By defining a boundary for growth, greenbelts help to foster easier circulation among densely developed areas while maintaining the rural character of areas beyond. The existence of greenbelts effectively precludes the extension of public investment in infrastructure and transportation to a wide area of low-density, single-use development of the type often considered synonymous with urban sprawl. As the primary organizing element of regional planning, greenbelts provide a context of relative certainty for decisionmakers who want to ensure that other regional investments in infrastructure are well situated with regard to sites for future residential and commercial development.

Figure 3. Conceptual diagram of a metropolitan area based on greenbelt development principles.



—Densely developed areas are contiguous.
—There is easy circulation among subcenters.
—Access among subcenters and new town centers cuts through narrow parts of the greenspace.
—Transportation and utility corridors have different levels of importance.

Preservation of Open Space Resources

Preservation of the countryside is a key feature of any greenbelt scheme, promoted for the benefits it brings to agriculture and recreation near to urban areas. Modern methods of agricultural production and the slowing of population growth in the countries examined here, however, have made the agricultural arguments for the greenbelt less compelling than they were originally. Today, concern is directed more toward ways to limit development of land that is in agricultural use so as to effectively combat urban sprawl, and advocates are more likely to be environmentalists than farmers.

There is general agreement that the retention of natural areas within urban

regions is an important quality-of-life benefit even when debate exists over what form it will take. Greenspace that can provide some sense of relaxation is a pivotal element in the modern metropolis. Traffic congestion, pollution, noise, and the generally hectic conditions of modern urban life have increased the importance of green reserves as a primary measure of regional quality of life.

These same reserves also harbor the potential for shaping the geographic distribution of metropolitan-area population concentrations. This goal amounts to a desire to manage metropolitan form, the primary purpose of the greenbelt concept as it was originally conceived. Both goals—enhancing quality of life and managing the distribution of population—are relevant today, as public officials have come to realize the high environmental and social costs of low-density suburban sprawl.

Reinvestment in Central Cities

Many central cities in industrialized regions have failed to compete well for business and residential development in this era of improved highway access and high rates of auto ownership. Major highways between downtowns and their urban fringes have spawned a pattern of growth characterized by low-density office parks, shopping centers, and residences in outlying areas of many major cities in North America and Europe.

The resulting land use, energy consumption, and transportation patterns are generally considered inefficient, with the worst criticisms being reserved for present patterns in the United States. The existence of a greenspace system around an urban core could have an effect on these disturbing and land-consumptive trends; it could steer development to places that can best be served by transit and could revitalize high-density, established centers.

Planning policy in Great Britain. Much of the legislation and policy associated with land use planning in Great Britain has embraced the greenbelt for the purpose of achieving a sustainable and comprehensible metropolitan pattern. The first lands to be incorporated as greenbelts were acquired through purchases or covenants made under the Green Belt Act of 1938, which guided the use of greenbelt lands based on the following principles:

- Passive recreational use.
- Retention of rural character.
- Restriction of industrial development.
- Strict control of the growth of existing towns and villages.

The Town and Country Planning Act of 1947, which required all municipalities to draft land use plans, made funds available to local municipalities that needed to purchase land from private parties to implement their plans.

Much as in other countries, in Britain high rates of automobile ownership have broadened people's choices of where to live and where to work. Because of the high level of interaction among the major cities of central and southeastern England, the area has been termed a megalopolis. Greenbelts—major elements of metropolitan planning policy that seek to hold the line among areas where urban uses would continue to consume more land as they grow closer together—around the major British cities in the megalopolis serve to preserve lands within the metropolitan areas for agricultural production and recreational or scenic value. Preservation occurs despite the fact that these lands are in demand for residential and commercial use.

The purposes of development restrictions on greenbelt land are widely understood in Great Britain. Historically, protests over the regulation of this land have not been strong, in part because much of the private ownership of the land incorporated into the greenbelts occurred at a time when the value and use of the land that planners wished to incorporate were truly rural. Demand for new residential and commercial development in metropolitan areas was originally absorbed by new towns, which were intended to be self-sufficient and to aid in the overall goal of distributing population and employment nationwide. In recent decades, planning policy has focused greater attention on the redevelopment of central cities, with government agencies sometimes offering financial incentives to developers of inner-city sites.

In the 1990s, growth management is again being debated in Great Britain, as the need for new housing units remains strong. The House Builders' Federation, as well as other business organizations, have asserted their position that the national government must free up significant amounts of greenbelt land to allow for the maximum amount of mobility and choice for individuals in contemporary British society. Despite various groups' efforts to erode the greenbelts, however, the Department of the Environment has held firm in its position that new development must be sited in areas other than the greenbelts.

Planning policy in the Netherlands. Historically, the principles for land use management in the Netherlands have been laid out in national policy statements, with development of detailed plans at the regional and municipal levels. These detailed plans at various levels of government have ensured a high quality of life for urban, suburban, and rural residents alike, and have commendably resulted in the development of desirable communities that do not infringe on scarce open space resources.

The successful implementation of national and regional planning policies to distribute population and employment while retaining greenspace has been aided by the high level of government ownership of developable land in areas where development pressures are strong. This feature of landownership makes the planning and development environment in the Netherlands both proactive and unique.

Of primary interest are the plans and policies for the *Randstad,* or *Rim City,* which is a conurbation of the four major cities of the Netherlands: Amsterdam, Rotterdam, the Hague, and Utrecht. The growth of the densely populated western Netherlands has been managed largely through policies adopted to retain an agricultural/horticultural and recreational reserve in the area between the cities of this region.

The area next to the Randstad where nonurban uses predominate is commonly known as the Dutch greenheart. The central position of the greenheart means that its conservation depends upon the development policy of the municipalities encircling it. The preservation, relatively intact, of this centrally located tract of land in an era of unprecedented development pressure has been achieved through policies designed to maintain the balance between urban and rural uses in the western Netherlands. These policies have succeeded in holding back the formation of a single, densely developed megalopolis without complementary open space resources.

In the last decade, the role of the greenheart has been challenged by various interest groups, including developers, housing consumers, and politicians. Despite the pressure from various interest groups, planners have held firm to the general principles guiding greenheart development. Rare is the case in which greenheart land is developed for urban uses before an investigation can be launched to see whether abandoned inner-city sites could serve the same development purpose.

As the Netherlands Counselor for the Environment states: "The Netherlands cannot afford to have vacant inner-city areas. . . . We need to retrofit." While duly noting consumer preferences, the counselor emphasizes the success of the greenheart policy over time, maintaining that the greenheart is the most recognizable physical manifestation of a society committed to enhancing the quality of the environment of the Dutch people.

Resources

Communities of Place: The New Jersey State Development and Redevelopment Plan. The New Jersey State Planning Commission, 1992. A policy and planning document that comprehensively categorizes all lands into several categories and focuses on conservation as well as on development of urban and rural areas.

Modernizing State Planning Statutes: The Growing Smart Working Papers. Vol. 1. American Planning Association, Planning Advisory Service Report No. 462/463, 1996. A collection of 26 timely papers from experts in law, planning, transportation, and the environment.

Yaro, Robert D., and Tony Hiss/Regional Plan Association. ***A Region at Risk: The Third Regional Plan for the New York–New Jersey–Connecticut Metropolitan Area.*** 1996. A visionary work that draws on the experience of metropolitan areas around the world as it proposes major new initiatives for a large and interdependent region.

The greenheart and the Randstad have together become a model of a high-quality rural environment and a high-quality urban environment that are codependent. The Dutch have clearly succeeded at managing their megalopolitan complex in a way that retains agricultural and recreational uses alongside intensive urban uses. The existing pattern is identifiable and sustainable at the subregional and regional levels, and forms a geographical unit of international importance, especially in the heavily urbanized multinational region of northwestern Europe.

The United States. Historically, the United States has had little experience with greenbelt or green area plans, whose main purposes are to define the limits of regional growth in the interests of sustainability and manageability. Most of the interest in greenbelts has drawn heavily on examples from Great Britain, and American planners have made few original contributions to the subfield of greenbelt planning. Furthermore, in this country the peak of interest in greenbelts as an integral part of regional comprehensive planning occurred in the period before World War II.

Current development patterns on the urban fringes of metropolitan areas of the United States are primarily the results of local communities' acting in the interest of their residents when approving or rejecting individual development projects. Typically, each community aspires to attract land uses like office spaces that will command high property taxes. Local governments pursue this approach because such uses make few demands on local services as opposed to uses that yield little tax benefit and make heavy service demands. An example of this latter approach includes high-density, low-income housing projects. Regional councils often have only advisory powers, making the comprehensive plans that they draft unlikely to be implemented.

Greenspace planning on a large scale has not occurred in the United States. The closest concept to greenspace planning that has been somewhat successful in selected regions and states has been growth management planning. Praised for establishing limits to the growth of a region, for capturing public support, and for providing a framework for regional cooperation, growth management planning represents an attempt to direct development pressures to those areas where infrastructure and natural resources will best be able to absorb increased use.

Most of the growth management strategies that exist today in the United States are part of comprehensive plans drafted by counties. Because of the relatively small size of many of these localities, developers often have succeeded in

sidestepping county growth management goals by relocating their projects in nearby counties where growth management goals are not in place, thus weakening the regional impact of growth management policy.

Metropolitan development in the United States consumes more land than similar development in Europe. Many American metropolitan areas straddle more than one state, and federal involvement in physical planning is virtually nonexistent. In countries such as Great Britain and the Netherlands, metropolitan areas are recognized as identifiable individual units, and green areas provide a break from continuous intensive development. But the opposite is true in the United States, where growth on the fringe of one urban area typically overlaps the fringe of another urban area, yielding a megalopolitan pattern.

Over a quarter-century ago, a phenomenon had already been noted whereby commuters from Princeton in central New Jersey were departing in two different directions each morning, with one set bound for metropolitan Philadelphia and the other for metropolitan New York. Indeed, a continuous band of urban and suburban development runs for a length of approximately 500 miles along the eastern coast of the United States from metropolitan Washington through metropolitan Boston. The Third Regional Plan for the New York City metropolitan area, just completed in 1996, describes the existing development pattern as one in which new suburbs are wrapped around old ones in ever expanding rings, yielding "75 miles of formless suburban sprawl."

Suburban areas throughout the United States, particularly those near major traffic interchanges, have absorbed tremendous amounts of office and retail space over the past 30 years. Most of the functions of the traditional central business district (CBD) now can be found in these suburban subcenters, or edge cities. Because the uses found in these suburbs are relatively similar to those found downtown, the urban/rural boundary now is a function of the distance from the edge cities than on the distance from the CBD.

The persistence of a low-density, automobile-oriented lifestyle would suggest that new growth on the urban fringe could continue as long as there is sufficient demand for residential, retail, and office space. Critics note, however, that the social, environmental, and economic costs of new development on virgin land are being overlooked by policymakers.

In his work *Land Use Planning on the Rural-Urban Fringe,* Gerald F. Vaughn criticizes municipalities that approve low-density developments without regard to the pressure that this pattern of development places on land values, land and water resources, and the cost of extending public utilities to a widely dispersed population. And a report by Stanford Lembeck entitled *Our Changing Landscape: Balancing Rural and Urban Needs* concludes: "The costs of land-consuming development are [both direct and] indirect. Spread-out development is costly to serve. . . . A great deal more time is spent getting from one place to another. It often is impossible to provide some services, such as public transportation, because of the widely distributed population."

Prospects for Greenspace Planning

One can speculate on how the patterns of metropolitan development and daily life might have differed if the traffic arteries and interchanges around which major suburban regional centers grew up had instead been set aside as greenbelt land. With a greenbelt, more intensive development projects would have been directed toward the urban core, and much more attention would have been paid to improving existing infrastructure and redeveloping centrally located areas. Increased densities would have fostered a more vibrant quality of life by stimulating the development of accessible environments of vitality and diversity.

With a greenbelt in place at the urban/rural fringe, careful management of lands in their natural state is readily accessible to urban residents, and the sustainability of a region's diverse range of environments over the long term is secured. "When land use planners can identify an edge to the built environment," writes Lembeck in *Our Changing Landscape,* "it becomes easier to assess a municipality's needs and existing assets, including infrastructure capabilities, public services, farming sites, ecologically sensitive areas, open spaces, and areas suitable for further development. Once this assessment has been made, clear program goals can be adopted to control and direct the future of the community."

Policymakers and citizens in the densely populated megalopolitan region of the northeastern United States should focus their attention on these ideas and on how greenspace plans could respond to the criticisms of current development patterns. Recent planning documents for the region—such as the New Jersey State Development and Redevelopment Plan, and the Third Regional Plan for the New Jersey–New York–Connecticut Metropolitan Area—support the idea of using greenspace systems as primary elements in growth management planning. These documents represent a planning approach that conserves natural resources and revitalizes existing centers wherever possible, discouraging scattered development on the urban fringe.

The Third Regional Plan for the New York City metropolitan area devotes an entire chapter to the benefits of greenspace in delimiting the boundary of development for this metropolitan area of more than 20 million inhabitants. The goals underlying the "greensward campaign" are:

- Public access to recreational resources.
- Maintenance of a regional "green infrastructure" to preserve ecosystems.
- Preservation of the supply of drinking water.

- Preservation of agricultural landscapes.
- Formation of "a permanent green edge to rapid growth, encircling the core of the region."

State governments are currently giving more attention to large-scale planning and development issues than ever before. Ten states now have agencies that oversee local and regional planning and policy decisions as they relate to development and conservation. The existence of the state agencies has served to fund an inventory of resources, to generate intermunicipal dialogue, and to educate citizens about the social, environmental, and economic costs of alternative planning scenarios. The three-tiered framework of state, regional, and local plans in Florida parallels the hierarchy of planning controls in the Netherlands (where the corresponding framework is national, regional, and local); it even goes so far as to reserve the right to plan for "areas of critical state concern."

The same strategies that have been used to gain public support and to mandate interjurisdictional cooperation in the development of metropolitan and state growth management plans can today be used to advance greenbelt and green area planning in areas of the northeastern American megalopolis where the fringes of metropolitan areas overlap. The many groups of users affected by the urbanization of the countryside can benefit from the use of greenbelts and green areas as a growth management tool.

In other countries, greenspace has had a major role in clarifying the urban/rural boundary and in ensuring the survival into the future of agricultural and recreational lands near the city. Greenspace planning is valuable to local government officials because of its role in shaping the development pattern of an overall region.

The comprehensive nature of greenspace planning helps to streamline the decision-making process for other public investments, reminding citizens and public officials alike of the important role that greenspace plays in decisions about regional growth. Indeed, decisions on public investment, and ultimately on private investment as well, will occur in a context in which greenspace is the primary element of maintenance and enhancement for a wide range of interests in a region.

Delicate Balance

Worldwide, there is a growing interest in the livability and sustainability of the environment. Under this heading, there is a wide range of concerns, including the physical and social components of the urban environment, the natural and recreational components of the rural environment, and the interaction between the two. Modern urban needs, however, have had an unparalleled impact on the delicate balance between urban and rural environments. Current concerns over the sustainability of resources have focused on the rate at which such resources can be depleted by urban mankind before plant and animal life, as well as water and air quality, are permanently altered.

Existing greenbelt and green area plans have clarified the boundaries of urban and rural areas and have given a greater sense of security about the future to residents of communities in the path of growth. Providing permanent open space reserves in places where they are demanded by urban residents also assures future generations access to the natural environment. True, market forces are kept under stricter control, and service provision is less readily allocated. But both of these changes will benefit the quality of life and the environment in a broader-based way than would less comprehensive development controls. PAS

Jordan Rosenfeld is a research associate with the Urban Land Institute, Washington, D.C. *Editorial assistance was provided by Gilda M. Haber, Ph.D., and Jane Librizzi.*