

LAND USE PLANNING AND MANAGEMENT IN URBAN AND PERI-URBAN AREAS

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Keywords: Urban fringe, Multifunctional landscapes, Urban ecology, Recreation, Infrastructure, Planning

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Summary

Urban and peri-urban areas are main theatres of human activities. Land use planning and -management in these regions is a primary tool in the struggle for a sustainable future. The comprehension of the urban areas as both structural and functional entities is a prerequisite for the sound and sustainable development of urban and peri-urban areas. The limited spatial resources in the peri-urban areas must fulfill several basic functions: production (agriculture and forestry), recreation, residence, waste disposal, and wildlife habitats. This can only be accomplished by employment of multifunctional land use, where several functions are fulfilled by every piece of land.

The built up urban areas must be accepted as a special situation that does not resemble any natural system. Nevertheless, in all facets of urban management and planning, natural ecological processes can be introduced. Restoration of hydrological systems, elimination of pesticides, or the introduction of extensive park management systems are examples of revitalizing natural processes in built – up areas.

1. Introduction

The many different demands on land to different purposes in combination with a general shortage of land make overall planning and detailed management of regional landscapes increasingly necessary. The land of urban and peri-urban areas in particular has become an extremely important object for planning and management, as the conflicting interests on land issues are extreme here.

After the collapse of the planning economies of Eastern Europe, planning has got a somewhat dubious scent, but nevertheless land use planning is a necessity rather than an option today, if the different and opposing land use interests are to be balanced.

The particular needs for planning and management of urban and peri-urban areas are aggravated because a major part of the global population in the future will be concentrated in cities, and thereby will be largely dependent on the peri-urban areas. In order to fulfill these demands, the production of food and forest goods, the availability of recreational options, wildlife habitats, residential areas, and the disposal of sound waste management will need careful planning, in which multiple use and multifunctional landscapes are key words.

| Region | Percent of total population living in cities and towns | |
|---------------|--|------------|
| | Year | Percentage |
| Great Britain | 1800 | 9 |
| | 1900 | 62 |
| | 2000 | 89 |
| South America | 1925 | 33 |
| | 1950 | 42 |
| | 1975 | 60 |
| | 2000 | 78 |
| Brazil | 2000 | 78 |
| Venezuela | 2000 | 85 |
| Ecuador | 2000 | 52 |
| United States | 2000 | 75 |

Examples of degree of urbanization and the speed of urbanization. Spawned by the industrial revolution, Great Britain was already heavily urbanized by 1900. Today UK resembles the status of most Western European countries.

South America experienced heavy population growth in the 20th century, most of this growth took place in cities (urban growth in SA was 5% p.a in 1950-2000, rural growth

2%). Strong regional differences exist; however, as Venezuela resembles Western Europe, whereas Ecuador is typical for developing countries. USA takes an intermediate position.

Table 1: Urbanization trends in Great Britain and the Americas.

Examples of the spread of urbanization are given in Table 1. Spawned by the industrial revolution, Great Britain was already largely urbanized by 1900. Today, the UK has reached the level of most Western European countries. South America experienced heavy population growth in the 20th century, and most of this growth took place in cities. Urban growth in South America attended almost 5 % per year between 1950 and 2000, while rural growth over the same period was only 2 %. Strong regional differences exist however, as Venezuela and Brazil resemble Western Europe whereas Ecuador is typical for developing countries. The US takes an intermediate position.

The focus of this chapter is on peri-urban areas and in particular on the interrelationship between cities and their surroundings.

2. Urban and Peri-urban Areas

The interest in land use in urban and peri-urban areas has grown with the increasing urbanization of rural areas in both industrialized and industrializing countries. Prior to the industrialization, studies in land use in urban and peri-urban had little meaning, as the space occupied by these regions was extremely limited. However, the rapid migration of rural populations to the urban centers from 1700 onwards added a new meaning to the concept of land use, mainly because urban planning implied the designation of specific areas for housing, industry, trade facilities, green space, waste disposal etc.

Whereas the delineation of cities formerly was clear, the modern cities of the 18th, 19th and 20th centuries sprawled into the countryside, structurally altering the land areas by the emergence of houses and infrastructure, and functionally occupying vast areas due to the demands of the urban dwellers. Densely built-up areas were denoted urban areas (including what many people refer to as suburban areas), whereas the transition zone between the urban areas and rural areas were denoted peri-urban areas, characterized by the presence of numerous urban functions, but structurally in many ways resembling rural areas with villages, fields, forests etc.

The management of peri-urban regions is based on the acceptance of the intimate interrelationship between the city and its surroundings. The failure to see and accept this interdependency implies a failure to plan and manage the human environment in a sound and sustainable manner. The failure to accept the extent of the cities both as structural and functional units may equally lead to incomplete and even disastrous decisions.

2.1. Structural and Functional Urbanization

When discussing urban and peri-urban territories, it is important to distinguish between

structural and functional urbanization. The structural city or urbanization encompass the areas which *per se* are built up and covered by buildings and infrastructure elements, whereas the functional city or urbanization encompass a more comprehensive area, including the land for housing, recreation, deposition or production on which the urban dwellers depend on. For example, a forest situated in the urban fringe may by all means resemble a forest far away from the city, but while the former is intensively visited by urban dwellers the latter may only sparsely be used for recreational purposes. In other words, the forest of the urban fringe is functionally urbanized, but is of course structurally not a part of the city. For more detailed information on landscape structures and functions, reference is made to Zonneveld (1995).

Figure 1 depicts a map of Copenhagen and the eastern Danish isles. Only about 10% of the land surface is actually built-up (structurally urbanized), but virtually the whole territory of the isles is functionally urbanized. A popular term denoting the zone between the densely sealed city centers and the structural and functional rural areas is the “rurban” zone, mingling the urban and rural concepts.

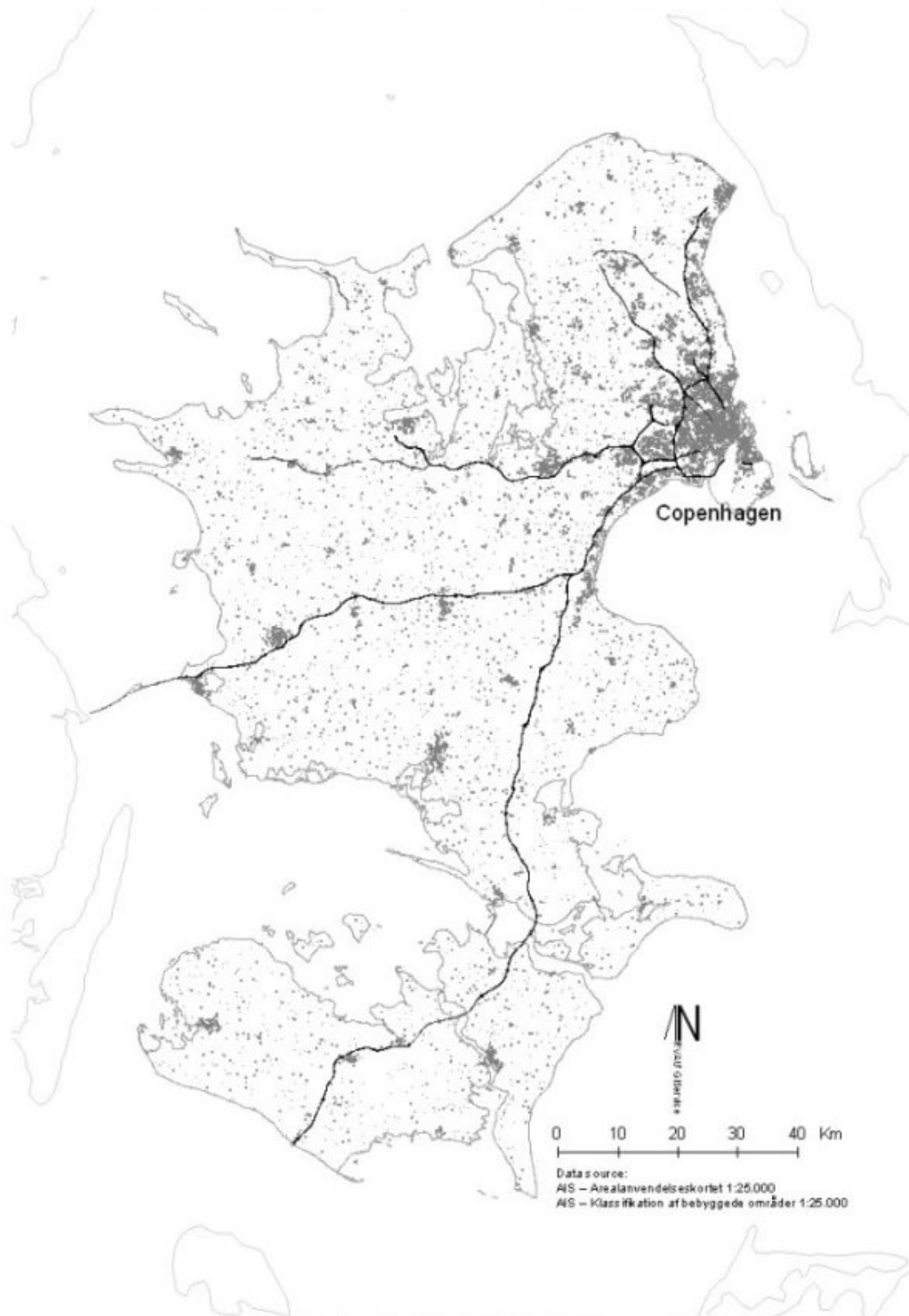


Figure 1. Eastern Danish Isles with built-up areas and motorways.

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Biographical Sketch

Henrik Vejre is Head of the Center for Forest, Landscape and Planning, Denmark and Associate Professor of Landscape Ecology at the Royal Veterinary and Agricultural University of Denmark. His research and teaching interests are focused on landscape ecology and countryside management. Focal points within this research comprise the planning for multifunctional land use, land use management for groundwater protection, and management of urban fringe landscapes.