

LAND MANAGEMENT IN URBAN AND SUBURBAN AREAS: THE CASE FOR SUSTAINABLE DEVELOPMENT

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Climate change and ecology have become state of the art research topics nowadays. The demand for nature conservation, protection and resource efficient policies have dramatically surged in the last decade. Land management and land use are among key aspects of sustainable program. City spatial development and economic growth serve as catalyst for present and future ecological changes. In order to create a sustainable development program, we must first look at present state of the urbanization, study the underlying processes and determine key factors that result in ecological changes and have major impact on environment. Sustainable development program should include the economic planning and regulations (taxation, investments etc.), social factors of urbanization and both national and municipal land management policies.

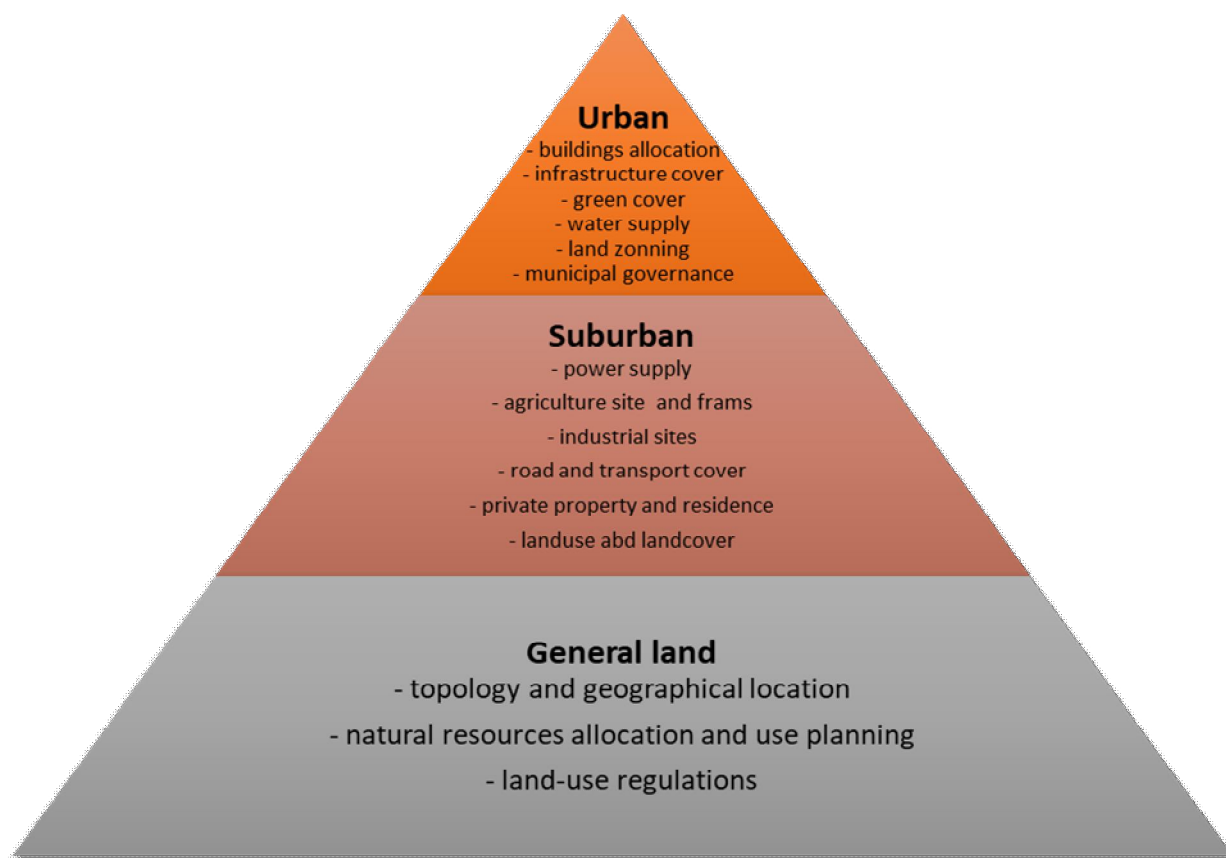


Fig. 1. Aspects of land management in the context of urban and suburban areas [1-4]

On Figure 1 we present the results of the research work, which includes main aspects of land management in the context of urban and suburban areas. The land

management have been divided into three major sectors – general land, urban and suburban areas. Among urban areas the following factors are the most dominate - buildings allocation; infrastructure cover; green cover; water supply; land zoning and municipal governance. The suburban land management consist of the following - power supply; agriculture site and farms; industrial sites; road and transport cover; private property and residence; land use and landcover. The general land sector is the pillar and serves as foundation for the land management planning - topology and geographical location; natural resources allocation and use planning and land-use regulation. It should be noted that such a distribution makes it possible to facilitate study and research in terms of sustainable program planning in future.

Table 1

Land use factors affecting the ecological situation and environment in urban areas

Factor	Areas	Affecting aspects Data	Ecology and environment aspects
1	2	3	4
Land Market: <ul style="list-style-type: none"> • Land Resources • Land Policy • Land Monitoring • Land Survey 	general land area	climate situation soil and land quality natural resources available and allocation national land regulations real estate market supply and demand	natural resource degradation negative local ecology impacts – waste, soil, and water contamination etc.
Land Management	urban areas suburban areas special protected areas water areas road and transport cover infrastructure and supply areas	national and municipal land use and management regulations ecology and nature conservation policies land market economy profile and data	changes in land use regulations, municipal or national monitoring policies
Land Development	city construction infrastructure agricultural industrial ecosystem and conservation	socio-economic development resources supply and demand	local biome damage changes in general environmental situation natural resource use and allocation
Land Tenure	general land area	land allocation ownership cadastral surveying and boundaries	-
Land Value	general land area green cover and water ecosystem and biome	land and natural resources degradation value and restoration costs	-
Land Use	general land area	national, municipal laws and regulations planning, distribution, and surveillance	-
Land Registration	general land area green cover and water ecosystem and biome	land use planning ownership and allocation taxes and value land use monitoring	nature and resources conservation and use survey, monitoring
Economic factors	general urban and suburban land area	taxes interest rate city GDP investments national currency and information employment and industry	restoration taxes and financial planning emissions taxes

1	2	3	4
Social factors	general urban area	waste management demographical profile	green cover maintenance planning waste policies and use planning
Sustainable development factors	general land area	zoning and land use planning state of natural resources and land	spatial development regulations resources mapping

* based on personal research data and research data [1-4]

In Table 1 we present the major land use factors affecting the ecological situation and environment in urban areas, which are grouped by the following features: factor, areas, affecting aspects, data and effects on ecology and environment. It should be noted that the main land use factors are - land market, land management, land development, land tenure, land value, land use, land registration, economic factors, social factors and sustainable development factors. The data presented in Table 1 can be used to create sustainable development plan and such plan should include the following aspects:

- land use policy – monitoring, surveillance and use planning;
- resources conservation policy and restoration financial planning;
- economic planning, investments and taxation;
- waste management policy and planning;
- urban green areas maintenance and restoration planning.



Fig. 2. Model of sustainable development for an urban and suburban area

The sustainable development model has been proposed by the author for both an urban and suburban areas (Fig. 2). The model consists of the economic aspects; social aspects; ecological aspects and land management aspects. The major aspects presented in Figure 2 include - natural resources single system management, new agricultural land-use planning and policy, financial investments for sustainable land projects, preservation, and restoration land resources allocation. This model provides a foreground for sustainable development planning framework.

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ECONOMIC MECHANISM OF SUSTAINABLE DEVELOPMENT OF RURAL AREAS

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Rural areas play a significant role in the development of Ukraine. This area accounts for a third of the total population of Ukraine and almost 90% of the territory on which the basic principles of food security are formed. A large part of the export potential consists of the products, which are produced on those areas. Despite all this, Ukraine has not yet reached the level of EU standards [1].

The necessity of sustainable development of rural areas is connected to many reasons. First is to improve the socio-economic well-being of the population. Second is to increase the degree of competitiveness of the territories at the level of the state economy and international markets. Last but not least is overcoming environmental problems. Sustainable development of territories is one of the main factors of bringing the economy to a completely new level.

Unfortunately, less attention is paid to the development of rural areas than to industry in cities. This is primarily due to the need to reduce the level of environmental issues and maintain nature for the proper, high quality and safe