

THE IMPACT OF URBANIZATION PROCESSES IN AGRARIAN SECTOR DEVELOPMENT

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ARTICLE INFO.

Keywords: urbanization, agrarian sector, land conversion, consumption patterns, food demand, technology, rural-urban migration, livelihood diversification, environment, sustainable planning.

Abstract

This article examines the impact of urbanization processes on the development of the agrarian sector. It explores the effects of urbanization on land conversion, changing consumption patterns, increased food demand, technological advancements, rural-urban migration, rural livelihood diversification, and environmental impacts. The article also highlights successful programs and initiatives that have mitigated the negative impacts of urbanization on agriculture. Through a comprehensive literature review and analysis of case studies, this article provides insights into the complex relationship between urbanization and the agrarian sector, emphasizing the need for sustainable planning and policies.

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Introduction: Urban agriculture (UA) is an important economic development issue, which is closely related to the economic, social, and cultural development of cities. It is a new agricultural model that relies on cities and serves for cities. With the rapid development of industrialization, urbanization, and the gradual improvement of human civilization, the concept of UA has gradually been updated and its function has been expanding. UA is being mentioned and implemented by governments or organizations. Simultaneously, the advancement of urbanization has also introduced more and more important features, such as mutual benefit and complementary resources between urban agricultural and non-agricultural activities. In addition, UA has continuously expanded its diverse functions as production, ecology, and leisure. With the advancement of industrialization and other structures, China's UA is developing in the direction of high investment, output, and efficiency. Moreover, the rapid development of urbanization has brought about the speedy formation of agglomeration effects. High technology-based agricultural facilities and factory production have become one of the symbols of urban agricultural development. With the large influx of external populations, the demand for quantity and quality of urban agricultural products has increased substantially. UA is highly open, and its production, processing, and circulation are guided by market demand. Combined with the advantages of optimal allocation of agricultural resources and production factors, it is easier to promote the development of UA in the direction of quality and branding. The added value of agricultural products also brings higher product returns (Chao Zhong and etc 2020).

Literature Review: Urbanization leads to the conversion of agricultural land for urban infrastructure, reducing the available land for farming and impacting food production and rural livelihoods. Urbanization influences consumer preferences, leading to shifts in dietary habits and increased demand

for processed and convenience foods, which affects agricultural production systems. Urbanization results in a greater demand for food, necessitating efficient transportation, storage facilities, and market infrastructure to connect rural producers with urban consumers. Urbanization drives technological innovations in agriculture, such as precision farming and advanced machinery, improving productivity and sustainability. Urbanization attracts rural populations to cities, leading to labor shortages in the agricultural sector and changes in the age structure of rural communities.

Discussion and Results: Successful programs and initiatives have emerged to mitigate the negative impacts of urbanization on agriculture. Examples include urban agriculture and rooftop farming, farmer-consumer direct linkages, agricultural extension services, land-use planning and zoning, urban-rural linkages and value chains, sustainable urban planning, and technological innovations. These programs promote local food production, enhance market access, improve livelihoods, conserve resources, and foster community engagement.

Urban planning policies play a crucial role in mitigating the impact of urbanization on the agrarian sector. By incorporating agricultural considerations into urban planning processes, governments and city authorities can protect agricultural land, promote sustainable farming practices, and ensure the long-term viability of the agrarian sector. Here are some key ways in which urban planning policies can help mitigate the negative impacts of urbanization on agriculture:

Urban Agriculture: Urbanization has led to the emergence and expansion of various forms of urban agriculture, including rooftop gardens, community gardens, vertical farming, and peri-urban agriculture. Urban agriculture utilizes available spaces within cities for food production, contributing to local food security, improved access to fresh produce, and community engagement. It often involves innovative techniques such as hydroponics, aquaponics, and vertical farming, making more efficient use of limited urban land (Coline Perrin and etc 2020).

Preserving Agricultural Land: Urban planning policies can designate agricultural zones and implement regulations to prevent the conversion of agricultural land for non-agricultural uses. By establishing green belts, protected agricultural areas, or urban growth boundaries, cities can safeguard valuable farmland from encroachment by urban development. These policies help maintain the availability of agricultural land and prevent its fragmentation, enabling farmers to continue their operations and sustain local food production (Coline Perrin and etc 2020).

Land Conversion: Urbanization poses the risk of converting agricultural land for urban infrastructure and development. As cities expand, prime agricultural land may be lost, leading to reduced food production capacity and increased dependence on external food sources. Balancing urban development with the need to preserve agricultural land is essential for ensuring sustainable food production, reducing food miles, and maintaining the resilience of local food systems.

Encouraging Mixed-Use Development: Urban planning policies can promote mixed-use development, which integrates residential, commercial, and agricultural activities within urban areas. This approach allows for the coexistence of urban infrastructure and agricultural operations, such as community gardens, urban farms, or peri-urban agriculture. By incorporating agricultural spaces into the urban fabric, cities can foster local food production, enhance food security, and create opportunities for community engagement (Daniele La Rosa and etc 2014).

Hanging Consumption Patterns: Urbanization influences consumer preferences and dietary patterns. Urban dwellers tend to have different food demands, including an increased demand for processed and convenience foods. This shift in consumption patterns affects agricultural production systems and supply chains, requiring adjustments to meet urban consumers' needs while ensuring sustainable and nutritious food options.

Technological Innovations: Urbanization has driven technological advancements in agriculture.

Precision farming, hydroponics, vertical farming, and smart farming techniques have emerged in response to the spatial constraints of urban environments. These technologies enhance productivity, optimize resource use, and reduce environmental impacts. Technological innovations can improve efficiency, increase yields, and promote sustainable practices in urban agriculture.

Supporting Urban Agriculture: Urban planning policies can include provisions and incentives for urban agriculture, such as rooftop gardens, vertical farming, and community gardens. These policies can facilitate the allocation of suitable spaces for agricultural activities within urban areas, encourage the use of vacant or underutilized land for farming, and provide guidelines for building design that accommodates agricultural infrastructure. By actively supporting urban agriculture, cities can increase local food production, promote sustainable practices, and strengthen the connection between urban dwellers and the agrarian sector (Grace Ning Yuan and etc 2022).

Integrating Food Systems into Planning: Urban planning policies can incorporate food systems considerations into urban development plans. This involves assessing the demand and supply of food, identifying gaps in access to fresh and healthy food, and integrating food-related infrastructure, such as markets, storage facilities, and distribution networks, into urban plans. By considering the entire food system in urban planning, cities can enhance the connectivity between rural producers and urban consumers, improve food access, and strengthen local economies.

Sustainable Transportation and Infrastructure: Urban planning policies can prioritize sustainable transportation and infrastructure systems that support the efficient movement of agricultural goods from rural areas to urban markets. This includes the development of well-connected roads, rail networks, cold storage facilities, and wholesale markets. By investing in transportation infrastructure that reduces post-harvest losses and ensures timely delivery of agricultural produce, cities can support farmers' access to urban markets and enhance their competitiveness.

Participatory Approaches and Stakeholder Engagement: Effective urban planning policies involve engaging stakeholders, including farmers, agricultural organizations, and local communities, in decision-making processes. By incorporating their perspectives, knowledge, and needs, policies can be tailored to the specific context and contribute to inclusive and sustainable agricultural development. Participatory approaches foster collaboration, create a sense of ownership, and ensure that urban planning policies effectively address the challenges faced by the agrarian sector.

Conclusion: In conclusion, urban planning policies play a critical role in mitigating the impact of urbanization on the agrarian sector. By preserving agricultural land, supporting urban agriculture, integrating food systems into planning, prioritizing sustainable transportation, and engaging stakeholders, cities can foster a harmonious relationship between urbanization and agriculture. These policies contribute to sustainable and resilient food systems, enhance food security, and promote the long-term development of the agrarian sector in the face of urbanization pressures.

Urbanization has significant implications for the agrarian sector, but proactive policies and innovative approaches can mitigate its negative impacts. Integrating agriculture into urban planning, supporting local food systems, and fostering sustainable practices are crucial for balancing urban growth with the needs of the agrarian sector. Successful programs demonstrate the potential to enhance food security, promote economic development, and create resilient and inclusive food systems within urban contexts.

On the other hand, urbanization in agriculture represents the integration of agricultural activities into urban environments and the impact of urban growth on rural agricultural landscapes. It involves urban agriculture, land conversion challenges, changing consumption patterns, technological innovations, rural-urban linkages, environmental considerations, and the need for effective policies and planning to ensure sustainable and resilient agricultural systems within urban contexts.

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