

Review

# Appraising Agroecological Urbanism: A Vision for the Future of Sustainable Cities

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**Abstract:** By the mid-century, urban areas are expected to house two-thirds of the world's population of approximately 10 billion people. The key challenge will be to provide food for all with fewer farmers in rural areas and limited options for expanding cultivated fields in urban areas, with sustainable soil management being a fundamental criterion for achieving sustainability goals. Understanding how nature works in a fast changing world and fostering nature-based agriculture (such as low-input farming) are crucial for sustaining food systems in the face of worsening urban heat island (UHI) effects and other climatic variables. The best fit for the context is transformative agroecology, which connects ecological networks, sustainable farming approaches, and social movements through change-oriented research and action. Even though agroecology has been practiced for over a century, its potential to address the socioeconomic impact of the food system remained largely unexplored until recently. Agroecological approaches, which involve effective interactions between researchers, policy makers, farmers, and consumers, can improve social cohesion and socioeconomic synergies while reducing the use of various agricultural inputs. This review presents a timeline of agroecology transformation from the past to the present and discusses the possibilities, prospects, and challenges of agroecological urbanism toward a resilient urban future.

**Keywords:** sustainable agriculture; climate change; urban food systems; resilient cities; soil and plant health



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## 1. Introduction

The recent coronavirus (COVID-19) pandemic paints a bleak picture of how vulnerable cities are to unforeseen complex global risks and crises. Urban settlements have existed for millennia, since the ancient river valley civilizations of Egypt, China, India, and Mesopotamia. These settlements, which initially depended mainly on domestic agriculture, grew and rose as the centers for merchants and traders [1]. Nonetheless, it was not until the 18th century that cities began to boom, spurred largely by the advent of industrialization [2]. This urban growth, better known as urbanization, has accelerated over the past half-century as large numbers of people have moved to cities for increased employment opportunities and greater access to quality education. Presently, more than