

FOREWORD

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With 9 billion people by 2040, feeding the planet's population will be one of humanity's greatest challenges. Under the combined weight of mushrooming population growth, rapid urban expansion and the challenges raised by the climate emergency, how we feed our cities is an increasingly pressing concern. In 2050, 80% of the world's food will be consumed in cities. One current

trend is to bring food production closer to them. It is worth examining as it provides a solution to the problem of food being transported great distances before finally arriving at the retailer or consumer. This trend is reviving ancient practices that existed back when cities were still places where agriculture could co-exist. In 19th century Paris, market gardens made it possible to directly produce and consume within the city limits.

At the same time, another global challenge – the climate emergency – is increasingly forcing us to rethink our resource management methods, including reimagining the ways that we grow or rear our food. Currently, food production is responsible for almost 25% of global greenhouse gas emissions, and poorly managed fertilization exacerbates pollution of the air, ground and water. We need to imagine an improved food production system grounded in better use of resources. This will involve moving to a circular economy, particularly in towns and cities.

Faced with the acceleration of these tendencies and determined to bring about a reinvention of food policies, urban agriculture is emerging as one driver for this new-look approach. Although urban agriculture cannot feed whole cities – potential yields are too low and restricted to certain types of food – it does make it possible to rekindle bonds between the urban and natural worlds, between cities and their foodstuffs, as well as helping to meet local demand. It is a very successful form of agriculture that is cropping up more and more in emerging and developed economies alike. The movement involves a growing number of actors: municipalities, supermarket and agro-alimentary companies, architects and engineers as well as civil society organizations that seek to develop this form of agriculture, usually driven by a desire to strengthen local

ties and change people's buying and consuming habits. But it is a movement that takes many forms and it is important to distinguish between them, identifying the varied aims of its promoters: food self-sufficiency and productivity in highly built-up environments, short circuits and limited environmental impacts, or simply rekindled social ties.

With this issue of its FACTS Reports, the Veolia Institute seeks to offer an analysis of the rise of urban agriculture at the city and territorial levels (urban and peri-urban agriculture), to understand the forces at work and the diversity of the actors involved, to show the types of issues that each form of urban agriculture can provide answers to and, lastly, to highlight the conditions needed to scale up.

This issue is divided into three sections:

- the first sets out the background for the rise of urban agriculture in developed and emerging economies. After a look at the historical background, it then examines a few of the key issues raised by urban agriculture: ability to improve food autonomy, ties between city and territory, the role this new form of agriculture can play in combating the climate emergency, and the role of policymaking in its development in cities;
- section two identifies different types of urban agriculture, seeking to highlight the various myths and realities that surround the subject. The aim is to show the potential offered by each type of technology and what can be expected of each form of agriculture in terms of productivity, environmental impacts and revitalization of the social fabric;
- the third section analyses successful programs and examines the cases of cities like Singapore, which have employed urban agriculture as a major lever for development. This final section also sets out to explain the obstacles and to pinpoint factors that might allow urban agriculture models to operate on a larger scale.