

# Cities and Agriculture: Developing Resilient Urban Food Systems

A book review by Aiperi Otunchieva

Authors: Henk de Zeeuw and Pay Drechsel

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Growing populations pose serious challenges to urbanization by putting natural resources under the risk. Within the last few decades migration from rural to urban areas has increased in most countries. As points of economic development, opportunities for employment and technological advancement, cities attracted those in search of better incomes and higher standards of life. However, these trends put stress on limited resources. Urban ecological footprints have dramatically increased due to large populations within cities covering relatively small spaces and intensified use of resources. Securing safe and sufficient food for urban populations is one of the main objectives of sustainable development. The fact that around eight million people go hungry every day, 12.9% of people in developing countries are undernourished, one of six children in developing countries are underweight and 45% of child mortality is due to poor nutrition (World Food Programme) forces us to think about ways of ensuring food security for everyone.

Henk de Zeeuw was the first director of the International Network of Resource Centres on Urban Agriculture and Food Security (RUAF) until 2012. Pay Drechsel works in IWMI Headquarters in Sri Lanka as the Theme Leader on Resource Recovery, Water Quality, and Health. Having been engaged in a number of national and international urban food projects, the scholars wrote a unique contribution to the debate which should be used by multiple stakeholders within the urban food circle.

The first chapter of the book presents world food con-

sumption patterns, changes and increases in the last fifty years. Nutrition transition takes place putting pressure on the resources such as energy, soil, air and water. However, the inclusion of food resilience policies in the city planning agenda is a recent phenomenon which is rapidly increasing in such cities as Casablanca, Keshbawa, Antananarivo, Bogota and others. The authors engage in a thorough discussion of urban food policies in the second chapter outlining various existing programmes around the world. Although given examples of how urban food policies differ from each other, four main objectives have been outlined. These are: insurance of access to safe and healthy food, secure public health, ensure sustainable food value chain 'from field to fork' and promoting local economies through enhancing food resilience. The third chapter is specifically designed for the decision makers, civil society and market players directly engaged with urban food policy. It provides a detailed overview of different stakeholders and their roles and specific steps policy makers should take in ensuring food security within the administrative divisions. The fourth chapter engages with the challenges related to cost, legal rights and availability of land in intra- and peri-urban areas. It also outlines ways for the integration of agriculture in cities and the design of urban spaces suitable for farming and agricultural production. Furthermore, it is evident that consumers prefer daily, fresh, easily available and affordable food. Short food chains satisfy this market demand, if food is grown within or in the vicinity of a city. This phenomenon is dominant in a number of developing countries positioning themselves in a comparative advantage in comparison to supermarket chains. The authors be-



lieve that more research is needed in revealing how urban producers and Small to Medium Enterprises (SME) can utilize the benefits of urban agriculture. Chapter six discusses a number of factors affecting urban food security and nutrition which include access to food, nutrition change, and nutrition related health problems. Urban populations do not only consume the most resources but is also a source for renewable resources such as biological waste and wastewater. In the case of proper recycling and reusing, it would make urban agriculture comparatively independent from external inputs turning it into a sustainable project. The challenges of waste recovery and reuse are discussed in the next chapter. The complex interrelations between urban agriculture and climate change mitigation are the central point of chapter eight. Benefits of urban horticulture, among others, includes possibility for income generation for farmers, freshness of fruits and vegetables and decreased reliance on imported food. The next chapter concentrates on urban livestock keeping, its management and its risks and benefits. Research on urban forestry is increasing rapidly in the last decade. Chapter twelve makes an overview of the strategies of urban aquacultural production in terms of food security. Furthermore, urban agriculture is analyzed through the feminist foodscapes framework which implies power imbalances existing in cities. Financing projects related to agriculture in intra- and peri-urban areas is another significant and crucial aspect discussed. Finally, the last chapter outlines the role of urban agriculture in disasters and emergencies.

The book is designed both for practitioners and for scholars as it provides up to date scientific findings on improved urban food policy, successful examples on this theme around the globe, and specific guidance for government officials. It also demonstrates food policies implemented in developing countries, thus facilitating mutual learning within the Global South and Global North paradigm. Decision makers should definitely consult chapter three in order to capture the idea of city food governance. In addition, the book opens new perspectives for future research thus setting a new agenda for further scientific studies on urban agriculture.

#### **Information of the author:**

Aiperi Otunchieva is a member of the Department of Organic Food Quality and Food Culture, Faculty of Organic Agricultural Sciences, University of Kassel, Germany.

#### **References:**

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# 10 billion, what's on your plate? (10 Milliarden , Wie werden wir alle satt?)



A film review by Forouq (Zahra) Kanaani

Director: Valentin Thurn

Producers: Jürgen Kleinig, Tina Leeb

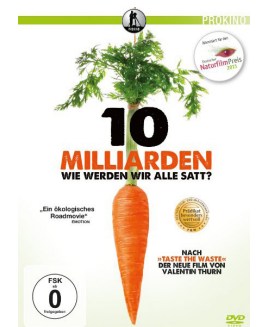
Film title: 10 billion, what's on your plate? (10 Milliarden , Wie werden wir alle satt?)

Production Company: Celluloid Fabrik

Production year: 2015

Country: Germany

Language: German



10 billion people by 2050. The food crisis, even with the current world population is a big issue and many people are either starving or struggling with malnutrition all around the world. Therefore, the debate about food security is getting hotter and the necessity of having a comprehensive perspective is important nowadays. Besides all nutrition problems that we have to solve, the climatic problems of current agricultural methods are another important issue which we should deal with in the near future.

This film takes a wide look into the vast vision of the

production and distribution of worldwide food - from insects, industrial farming, and artificial meat to the novel methods of organic or even conventional self-cultivation. Valentin Thurn (the food activist and best-selling author of "Taste the Waste") searches for global solutions and tries to find the best suggestions to solve the future food crisis in the world.

The film "10 billion, what's on your plate? - 10 Milliarden - Wie werden wir alle satt?" a 102 minute colourful and harmonious movie, was produced in 2015. The director starts his inquiry with asking about the possible al-



ternatives to feed the projected 10 billion people. He brings up the subject with any possible alternatives, such as the exigency of having insects as a source for food, like some populous communities, at present. Then he goes to several scientific efforts which are trying to introduce the ultimate solution for the global food crisis. During this worldwide journey, he meets scientific institutes in many developed countries like Germany and Japan and evaluates their attempts and ideas about the manner we should have to control the hunger problem.

Thurn tries to criticize some of these endeavors. In some cases, he indicates that many of these efforts, are more likely to consider the food crisis very astutely as a business subject rather than a humanitarian solution to save the people from starvation. In this frame, he provides some examples of institutions which try to keep small scale farmers all around the world more dependent to their production, like seed or sapling. The manner of these immense companies and institutes shows the financial tendency of their activities which might lead to the current problems in the area of food production and distribution.

Accordingly, he also appraises the domestic or global effect of food prices and stock exchanges on the agricultural practices and concludes that drastic fluctuation in agricultural stocks could lead to real catastrophe for poor people which could not purchase food.

Thurn also refuses to accept the gene-engineered fish and other gene-modified products as a final solution

for world hunger problems in future. In the case of fish, he argues that fish like salmon, natural or genetically modified, should be fed with other fish products, which are rapidly depleting.

In the film another possible alternative for the future hunger problems is shown. Artificial meat producing programs are currently running all around the world; like "The cultured beef project" at Maastricht University in the Netherlands. Artificial meat products tend to be more of a solution for future food safety and even climate problems. However, when considering the production price of this artificial meat it is obviously an unreachable source of food for a numerous amount of people, even in the future. At the moment, it costs approximately 250,000 € for a Hamburger-size meat!

In contrast with above-mentioned pursuits, the director highlights the importance of independent small scale farming, using the example of a local farmer in Malawi, who managed the hunger issue in her rural region successfully. She applied mixed farming practices by using the local crops. The local farmers in that village, not only consume the crops as their own food, but also sell them as a way to make revenues.

Other examples of agricultural scenarios are European, American, Indian and African farmers trying to use various practices for managing their farm in the most sustainable way. Although it seems that intensive industrial agriculture is obtaining more yield, studies show that small scale farmers are acting in the more sustainable way financially, especially when stockholders are promoting local markets and trying to skip transporting





the products between long distances.

As a conclusion, it is clear from the evidence produced by the director that the solution to feed the projected 10 billion world population in the future is with local farmers who are trading their products in domestic markets and avoiding gearing their farms towards relationships with large agricultural companies. Basic human rights, where every individual has access to secure and nutritious food is the duty of our generation. We should also be responsible about the food we are consuming.

Mary Clear (founder of Incredible Edible: A NGO organization which turns non-edible plants of urban landscapes into edible crops, foe free)

“We believe that politics would not fix the food situation of the world; money would not feed people across the world, the science will not fix the problem, only kindness will.”

All photos from  
<http://www.10milliarden-derfilm.de/>



#### Information of the author:

Forouq (Zahra) Kanaani has obtained a Bachelor degree in “Agricultural Engineering, Agronomy and Plant Breeding” from University of Tehran and then, she finished her M.Sc. studies in “Agronomy” in Iran in the year 2013. In her Master thesis, she investigated the organic practices to suppress the competitor plants on the crop field. Currently, she is pursuing her second Master study in Sustainable International Agriculture from University of Göttingen and University of Kassel and hopes to bring her contribution to solve the global food and water problems.