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# Urban-rural linkages and their future: impacts on agriculture, diets and food security

O. Mora, F. Lançon, F. Aubert <sup>1</sup>

**Abstract** – Recent debates on food and agricultural issues emphasize the significance of the spatialization of food systems and location of agriculture. In this emerging food system geography, urban-rural relationships play a significant role in food value chains, food security and nutrition, which is still poorly understood. This presentation explores these issues based on rural-urban scenarios at 2050. This research combines two approaches: a comprehensive scientific review of urban and rural changes, and a foresight method based on an expert group. Our results focus on four main future figures: megacities and rural-urban blurring; role of intermediate urban centres in agri-food networks; household mobilities and multi-activities between urban and rural areas; counter-urbanization and re-agrarianization. These four scenarios help to understand how distinct issues might be articulated, and to better differentiate what is at stake for agriculture and food security in those specific forms of urban-rural relationships.

**Keywords** – urban-rural scenarios, spatiality of food systems, urbanization, mobilities, rural nonfarm activities, re-agrarianisation, agriculture and food security.

## INTRODUCTION

Recent debates on food and agricultural issues emphasize the significance of the spatialization of food systems and location of agriculture. Those debates concern national dependencies on world food markets which have come to forefront through food crisis, land grabbing international debate, the strong increase of non-communicable diseases related to diet in developing countries, and, in this context, a growing interest for urban agriculture, city-regions and re-location of food production. In this emerging food system geography, urban-rural relationships play a significant role in food value chains, food security and nutrition, which is still overlooked in spite of few studies (Tacoli, 2003; Marsden and Sonnino, 2012).

The aim of this presentation is to explore these complex and intricate issues based on scenarios of rural-urban linkages at 2050. Through these scenarios, we underline the significance of spatial assemblages of food system for food security and nutrition.

## METHODS

This foresight research is based on two approaches: the first one is a comprehensive scientific review scanning current trends in urban and rural changes, and the second one is a foresight workshop based on an expert group and conducted as part of the Agri-monde Terra project on Land uses and food security in 2050, led by Inra and Cirad. First, this workshop resulted in building assumptions about urbanization and rural processes in 2050, based on the underpinning empirical observations and controversies. Then, crossing assumptions about urbanization processes and rural dynamics, we produce a matrix of scenarios describing urban-rural relationships in 2050. The aim of this double-entry table is to explore the widest-possible latitude of rural-urban interactions and their implications for agriculture and food security.

## RESULTS

Up to 2050, urbanization processes appear as major drivers of change, transforming social, economic, spatial, and ecosystem interactions between urban and rural areas, and playing a central role in determining the movement of food and the organization of agro-food networks.

Urbanization and the growth of cities have concentrated consumers in urban centers, physically distancing them from the spaces of agricultural production, making the feeding of urbanites reliant on complex and sometimes long supply chains that mix local, regional, and international scales. But the theory of a shift from a mainly rural to a mainly urban population, through rural-to-urban migration, that underpins the global rise of an "urban era" is currently being challenged, particularly through debates surrounding the analytical and statistical frameworks used to describe the urban and the rural, but also around the mechanisms at play (Brenner and Schmid, 2013). The apparent uniqueness of the urbanization phenomenon conceals a diversity of processes, including the dramatic growth of small and medium towns, the emergence of city networks and the development of large-scale megacities (Montgomery 2008; Moriconi-Ebrard et al 2010; McGee 2009).

A diversity of rural dynamics has been identified. First, non-agricultural activities develop in rural areas alongside agricultural ones (Haggblade et al 2010; Losch et al 2012). Non-farm activities provide additional income streams for rural households, drives permanent and temporary migration towards urban centres (with money and knowledge flowing

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back towards the countryside), and has led to the phenomenon of multilocal households (Rigg, 2006). Household strategies in particular prompt a reconsideration of the urban–rural dichotomy in favour of diverse possibilities ranging from urban to rural, which both provide opportunities and present challenges for households (Potts 2013). Second, from a spatial perspective, some rural areas develop into peri-urban areas as a result of urbanization pressures, with a specific mix of agricultural and urban activities (Lerner, 2011; Mc Gee, 1991; Moustier et al 2004). Third, synergies arise between rural areas and small towns as they are simultaneously a market for products, a place for food processing, and spaces of intermediation with other urban markets. Fourth, agriculture remains the primary activity in rural areas in developing countries. In regions where urbanization processes are weak, some re-agrarianization can happen, mostly due to political and social crisis. Rural areas and agricultural activities continue to face specific issues with regard to poverty, food insecurity and undernutrition; more than half of the people in the world facing food insecurity are small farmers (Andersson Djurfeldt, 2015).

Crossing assumptions about urbanization processes and rural dynamics, our scenarios to 2050 focuses on four main future figures: megacities and rural-urban blurring; role of intermediate urban centres in agri-food networks; household mobilities and multiactivities between urban and rural areas; counter-urbanization and re-agrarianisation. These four scenarios can help to understand how distinct issues might be articulated, and to better differentiate what is at stake for food security in those specific forms of articulation. Through the scenarios, three main issues appear that could determine the food security and nutrition issues in different ways: the household mobilities, the organization of food value chains, and the intertwining of urban and rural spaces.

#### CONCLUSIONS

Within this framework based on rural and urban current trends, we explored a number of issues working on assumptions at 2050. We confront the narrative of urbanization with the emergent processes of rural de-agrarianisation and development of non-farm employment. Linked with urbanization processes, modern food value chains, led by transnational food companies, are complexifying the interactions between urban and rural areas, intrincating scales and places, resulting in nutrition transition and impacting food security, and in different location of agricultural production. Also, despite the homogeneous global discourse on world urbanization, looking at the plurality and diversity of urban dynamics help us to reconsider the diverse impacts of urban-rural relationships on food and agricultural issues.

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