Exploring the spatial planning dimensions of urban informal food systems in China

(Dissertation in Process, Luoman Zhao)

Food systems have usually been conceived of as a set of activities ranging from production (the field) through to consumption (the table), with particular emphasis on marketing and the multiple transformations of food that these entail (Polly J. Ericksen, 2008). Informal food sector (farmers market, morning market, mobile vendors, etc.) provides basic living security for migrant workers and local underclass and contributes to affordable fresh food and social inclusion, but at the same time brings some negative impacts to cities such as social disorder, traffic jams and public hygiene problems. In recent years, the crisis of China’s urban food system has gradually emerged and is becoming more and more serious. The main contradictions lie in three areas: growing population and the demand for food, urban expansion and land use, food distribution and transportation (Zhao Yuanchuan, Zhang Yukun, Zheng Jie, Zhang Rui, 2013). While informal food systems contribute to biodiversity, supplement of arable land and helps to shorten supply chains and enhance food supply specialization and diversity.

However, the current urban spatial planning ignores the importance of informal food systems. Vendors with large population struggle to survive under the exclusion from urban space and policies. Informal sector helps build small-scale and multi-functional food systems (Viljoen, Bohn, & Howe, 2005) and the deficiency of this part would lead to the unsustainable development of the city, so that its fragile food system cannot cope with natural disasters, ecological crises and social contradictions (Brooks Karen. Place Frank, 2019). As a result, it is important to link urban space with every section in informal food chain and to find what kind of urban morphology is conducive to realizing the sustainability of food system. Food systems from production to waste management is a complex system. The form, size, density and land use pattern of the city will all have an impact on activities in food system. Ultimately, sustainable space morphology of food system aims to achieve different objectives. The most prominent among them are decreased energy use, reduced waste and pollution, reduced automobile use, preservation of open space and sensitive ecosystems, and livable and community-oriented human environments (Jabareen, 2006).

This research aims to optimize urban space for informal food systems and to maximize their benefits while reducing the associated risks. Informal food systems can be considered as an integral part of viable strategies for sustainable and equitable urban development. By establishing a space assessment system of food supply chains, this research evaluates and compares informal food systems at different levels and analyzes their positive and negative impacts on city space, so that to improve connections between urban space and informal food chains. Through the urban morphology analysis of urban space occupied by different parts of the food chain and its evolution rules, the research will propose spatial planning principles for informal food systems.

Key research questions:

1. What are the advantages and risks of informal food systems in social background of China?

2. What are the spatial relationships in the informal food system? How to assess urban space in informal food systems?

3. How urban spatial morphology and planning influence every link as well as whole food supply systems?

4. How to upgrade the single spatial link in informal food systems into an integrated urban food supply system?

5. What kind of urban space planning is conducive to realizing the resilient and sustainable food system?