



Achieving rural spatial restructuring in China: A suitable framework to understand how structural transitions in rural residential land differ across peri-urban interface?



Ma Wenqiu^{a,b}, Jiang Guanghui^{a,b,*}, Zhang Ruijuan^{a,b}, Li Yuling^{a,b}, Jiang Xiaoguang^{a,b}

^a State Key Laboratory of Earth Surface Process and Resource Ecology, Beijing Normal University, Beijing 100875, China

^b College of Resources Science and Technology, Faculty of Geographical Science, Beijing Normal University, Beijing 100875, China

ARTICLE INFO

Keywords:

Rural residential land transition
Internal structure
Driving factor
Urbanization
Policy implication
China

ABSTRACT

Since the late twentieth century, rural areas in China have experienced a rapid and far-reaching transformation of social and economic structures. Residential land in rural areas, as a type of land where rural residents live and engage in producing, is under significant pressure and face significant change as a consequence. How has rural residential land changed over time, and why it differs across peri-urban interface? This paper presents a methodology for confronting this issue. By applying an integrated framework, we explored the rural residential land transition patterns from the internal structure, i.e., rural residential land-use structural transition (RLST) and identified the driving forces from the perspective of urbanization and industrialization. Our findings show that there are three RLST patterns in China, i.e., non-agriculture, rurality and decay. During the period, the peri-urban area – Pinggu has shown the coexistence of non-agriculture and decay patterns. In particular, RLST patterns varied at different levels. Spatially, along with getting closer to urban areas came increasing complexity of RLST patterns, which formed the structure of circle layer. The various RLST patterns are closely linked to interaction and reorganization between external and internal factors, including basic condition, industrialization, urbanization and policies. Among of them, urbanization changed the internal structure of rural residential land through the population flow; while industrialization influenced the RLST through shaping the industrial structure and level of economic development. Other outstanding issues discussed in this paper relate to the implication for rural spatial restructuring and benign rural residential land transition, which can be achieved through industrial structure reshaping, population relocation and cultural regression. The findings of this study can help us better understand the process of rural residential land transition and thus have significance for the land use multifunctionality and restructuring policies in rural China.

1. Introduction

Along with the rapid pace of urbanization in recent years comes the social, economic, and environmental transformation in rural areas across the world (Elshof et al., 2017; Argent et al., 2009; Champion, 1999), involving population, industry, land, etc. Rural residential land, as a major land-use type in rural settlements where rural residents live and engage in producing (Yang et al., 2015), is under significant pressure (Tan and Li, 2013) and faces significant change as a consequence (Lambin and Meyfroidt, 2010).

The magnitude and the rapidity characterizing the rural land use change process, has aroused the attention of the scientific community. In early period, rural areas were home of people to live and work. A

growing number of studies have examined area change (Jin, 1988; Jin et al., 1990; Hu et al., 2007) and spatial patterns of rural residential land (Zhang, 1989; DeMarco and Matusitz, 2011) at the country scale. Then, when more and more people lived in urban areas than in rural areas, some scholars have investigated the influence of the depopulation on the rural residential land use change in different locations (Liu et al., 2017a; Siciliano, 2012; Tian et al., 2016; Xiao et al., 2015). Huang et al. (2011) argued that rural residential land expansion was one of the most important symbolization under the urbanization process. Researchers emphasized that human intervention on decisions can be viewed as the major driving force regarding the distribution, and expansion of rural residential land (Ariti et al., 2015; Magesh and Chandrasekar, 2017). Recently, research on rural residential land use

* Corresponding author at: College of Resources Science and Technology, Faculty of Geographical Science, Beijing Normal University, No. 19, Xijiekouwai Street, 100875 Beijing, China.

E-mail addresses: wqm@mail.bnu.edu.cn (W. Ma), macrophage@126.com (G. Jiang), zhangruijuan0722@yeah.net (R. Zhang), 101478335@qq.com (Y. Li), 1052244020@qq.com (X. Jiang).

<https://doi.org/10.1016/j.landusepol.2018.04.024>

Received 7 March 2018; Received in revised form 9 April 2018; Accepted 9 April 2018
0264-8377/ © 2018 Elsevier Ltd. All rights reserved.

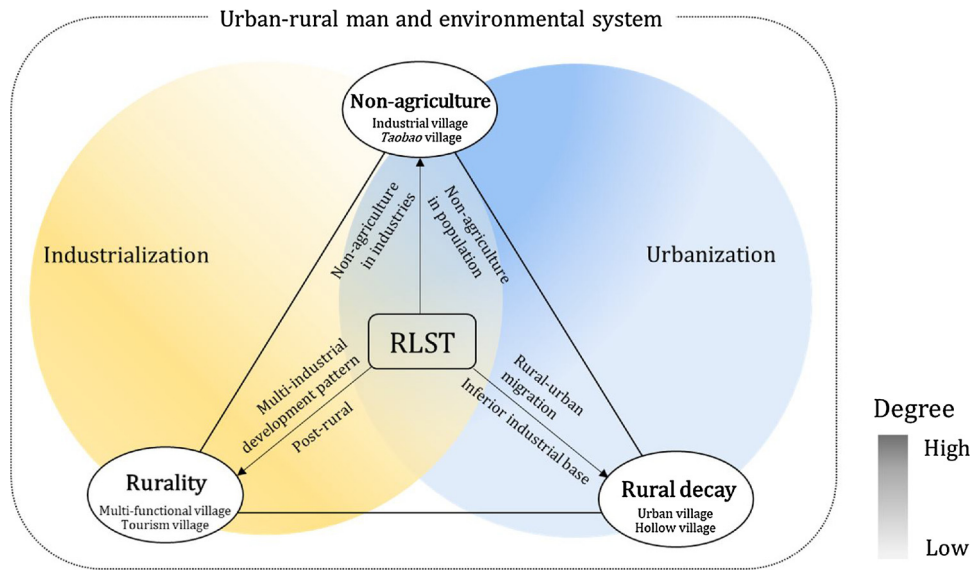


Fig. 1. Triangle explanatory framework for RLST in China.

change became multifaceted, multidirectional, and multidisciplinary (Yang et al., 2015). Researchers have depicted the system and structure of rural residential land in typical areas (Conrad et al., 2015; Tian et al., 2017; Hu et al., 2007), housing land functional evolution (Jiang et al., 2016; Long et al., 2007; Zhou et al., 2013; Liu et al., 2013; Xie and Lu, 2017; Siciliano, 2012) and hollowing of rural settlements (Long et al., 2012). The driving effects of industrialization and urbanization, including rural population flow, rural industrial transformation, and public service facilities construction (Holmes and Argent, 2016) have also been analyzed.

Furthermore, when Land Change Science (LCS) and Global Land Project (GLP) introduced into China, new perspectives have come to the field of rural land use change (Grainger, 1995; GLP, 2005). Rural land-use transitions caused by the constantly experience social, economic, and environmental transitions in countryside has aroused increasing attention. Qu et al. (2017), Song et al. (2013) and Long et al. (2009) have pointed to the rural residential land transition conceptual frameworks, as well as characterized the rural housing land-se transition and its coupling relationship with rural socio-economic transformation from the increasing and decreasing tendency. So far, numerous studies employed change or transition of rural residential land and its driving forces. Rural residential land transition has always been described as the changes in rural residential land area of a certain region (Ma et al., 2018). Despite these work, there are still some knowledge gaps, especially in China.

It has been observed that China shows one of the highest rates of urbanization (Seto et al., 2011), and has the large-scale rural area raising the more than 600 million people (National Statistics Bureau of People's Republic of China, 2015). In China, both society and economy are experiencing a transition period from a traditional agricultural society into a modern industrial and urban society, and from a traditional planned economy to a modern market system (Holmes and Argent, 2016; Li et al., 2015). The reform-induced industrialization and urbanization have rapidly altered the physical and human landscapes in China's rural areas, as evidenced by the substantial rate of rural housing development, rural-to-urban migration, agricultural to non-agricultural land conversion, widening rural-urban income gap, and regional rural inequalities (Long et al., 2010). In rural areas, rural residential land, accounting for the 70% of the rural built-up land area, is important social units because they reflect the relationships between people and land, the historical background, and the sociopolitical relationships (Jones, 2010; Robinson, 2003; Ottomano Palmisano et al., 2016). Thus, its transition and development not merely embody the change in land

use morphology, but also in the internal land use structure, referring to the rural residential land-use structural transitions (RLST). Understanding the RLST is crucial to explore the of rural environmental impacts on rural land-use transition and reveal rural function and structure changing characteristics under the influence of industrialization and urbanization, and ultimately promote rural spatial restructuring. However, we have little knowledge of the characteristics of RLST, and its link with multi-function of rural development have hardly been studied.

Thus, there is a clear need for studies that analyses the RLST patterns and their formation mechanism. The purpose of this present paper is twofold. On one hand, it is to examine the RLST patterns at multi-level and identify the driving forces from the perspective of urbanization and industrialization. On the other hand, it is to discuss the question posed in the title of the paper: How RLST differ across peri-urban interface? Why they differ? This paper may help to understand RLST patterns and its formation mechanism, enrich the rural transformation theories in the sight of internal function and structure, and put forward policies for the restructuring and sustainable development of rural areas in these regions.

In order to reach these goals we start by presenting an overview of the explanatory framework of RLST in China. Here we discuss the related concepts, causes and patterns of RLST based on the existing development tendency of Chinese villages. The paper continues with a quantitative characterization of RLST patterns at the town and village level, and driving factors comparison between each patterns. The fourth section explicitly turns to the analysis of formation mechanism of RLST, and discusses issue of rural multifunctionality development and what RLST implies for rural spatial restructuring, and the last section concludes the paper.

2. RLST in China: an explanatory framework

In China, rural residential land is defined as settlements that enable residents to primarily engage in agriculture, provide habitation for rural residents, and become developmental centers for rural communities (Zhou et al., 2013; Yang et al., 2016). Rapid urbanization and industrialization process has caused urban-rural relationship always being in the dynamic change. Currently, rural areas have been passively involved into this process, where the core of human settlements and economic output moved to cities gradually. Along with this change is the major functional evolution of rural residential land and land-use structural transition (Kan, 2016). Currently, there are three transition

Download English Version:

<https://daneshyari.com/en/article/6546444>

Download Persian Version:

<https://daneshyari.com/article/6546444>

[Daneshyari.com](https://daneshyari.com)