

# Analysis and prospect of research hotspots on international rural settlements

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**Abstract:** *With the development of multi-functional agriculture, rural space has been given new connotations, and the space management model of rural settlements has changed. Based on the analysis of the international background, this paper sorts out the development process of rural settlements and extracts the research topics related to rural housing. The results show that: (1) With the development of social economy, rural ecology and consumption value are increasing day by day, and the population shows the preference for migration to rural areas. The rural real estate market also has been developed in large quantities. National history and culture is one of the important factors affecting the migration of urban residents to rural areas. (2) Relying on the diversity of rural landscapes, rural residential space has gradually opened up to leisure and entertainment activities. The function of residential buildings has been separated from agricultural production and changed to capitalization. (3) With the change of owning the main body of housing, the value of housing derives diversified values such as entertainment value, cultural value, emotional value, etc. With the migration of the middle-class population, it has triggered the separation of housing value between regions.*

**Keywords:** *rural settlements; rural housing; functional transformation; landscape*

## 1. Introduction

With the development of urbanization and industrialization, a large number of resource elements have gathered into urban areas, and rural areas have shown a depression. A large number of pastures, farm houses and industrial buildings in Western Europe are idle and abandoned, and "Dead villages" have emerged in Eastern Europe. Because the single structure of the economy restricts industrial development, rural areas are gradually declining. Urban and rural development is seriously unbalanced. Rural areas have always been the key to solving problems such as food and energy security and ecosystem services<sup>[1]</sup>. The uneven flow of resources has led to the extensive production of rural agriculture, a serious shortage of the labor force and the daily destruction of the living environment. With the development and expansion of the city, the living standards of urban residents have gradually improved, and the consumption demand for a natural, healthy and green lifestyle is becoming increasingly strong. Urban and suburban areas are radiated by urban development and begin to transform to non-agriculturalization. At the same time, the turmoil caused by the global economic crisis and a series of environmental and social problems arising from the development of urban space have triggered a wave of anti-cultural land return, advocating a life away from pressure and yearning for a relaxed, harmonious and free life. Rural space has become a place for such groups to migrate, providing a driving force for the spatial transformation of spatial functions in remote rural areas with rich natural resources. Against the background of the decline of rural productivist and the geographical expansion of capitalism, a multi-functional rural regime is quietly emerging<sup>[2]</sup>. As early as the mid-19th century, the British scholar Vince put forward the concept of "Rural dilution", reflecting the changes in the social structure of the countryside. The proportion of the rural population decreases with the increase of migrant population, thus weakening the original characteristics of the countryside<sup>[3]</sup>. This image and Words such as "return to land", "reverse urbanization", "post-productivist" and "multifunctional countryside" are intertwined. On the one hand, in the post-productive context, large-scale and mechanized production pursues less labor, and with the aging of the population and the shift of urban residents' consumption, it promotes the flow of urban population to rural areas. On the other hand, the migration of foreign population leads to the rise of local house prices, forcing the outflow of young people<sup>[4]</sup>, the countryside is undergoing restructuring and reconstruction. The population of some radical rural areas has surged, and the economic, social and cultural structures have changed. The all-round changes are not limited to the role of domestic interregional migrants, but also neoliberal trade and agricultural policy reforms have promoted international migration. Woods

proposed the global countryside, believing that rural areas are in the trend of globalization, and diversified migration flows have further promoted the multifunctional transformation of rural areas<sup>[5]</sup>. The increasing attention and the trend of rural consumption are the driving forces of functional transformation<sup>[6-7]</sup>. Against the background of frequent international food security problems and the transformation of the consumption culture of urban residents, some European countries have begun to systematically encourage "return", promoting the rural life of "rural idyll" to achieve rural revival<sup>[8]</sup>.

At present, the countryside is developing in the direction of "complication" and "diversification". Agricultural restructuring, economic restructuring and social space reconstruction have promoted the transformation of rural space, creating a multi-functional landscape in rural areas and realizing the multi-functional transformation of rural space into a sustainable development path of rural areas, and multi-functional villages have become a new development paradigm after rural industrialization. As the main components of rural settlements, the spatial pattern and functional transformation of rural farms and houses are important aspects of rural development. Traditional rural architecture carries the cultural characteristics of different regions, and the evolution of its spatial structure reflects the production relationship between people and land. Farms, houses, barns and other buildings not only serve as a livelihood guarantee for rural residents, but also play a supporting role in agricultural development. Along with agricultural transformation, residential buildings have also been given new connotations. Rural landscape is moving towards commercialization, privatization and personalization, and rural material and social space are also redistributed with economic transformation<sup>[9]</sup>. Therefore, the development of rural diversification is inseparable from the diversified use of farms and residential buildings. Wilson summarized the differences in the post-productive state of rural productionism, arguing that in post-productiveism, agriculture has lost its dominance, and new manufacturing and services have increased the demand for rural space, from rural production to rural consumption<sup>[10]</sup>. Changes in population movements and economic structure have led to the continuous development of housing in rural areas. Some scholars believe that this post-productive model challenges the dominant position of agricultural production and has a negative impact on agriculture<sup>[11]</sup>, and balancing rural land development and utilization is still the key to rural development. Based on this background, this paper will sort out the research progress of rural settlements, excavate the research topics of rural housing, and provide reference for subsequent further research.

## 2. Data sources and research methods

This article will sort out Chinese and English literature with the help of cite space literature analysis software, explore and summarize research hot spots and research directions, analyze hot journals and research fields. Lay a theoretical foundation for the further writing of the article. Since rural housing is the main component of rural settlements, and some scholars regard the two as the same concept, the selection of domestic and foreign literature includes rural settlements and rural housing. The selection of subject words in foreign literature includes rural settlement and rural residential land. At the same time, in order to further understand the development process of rural settlements, by ingesting theme of counter-urbanization, post-productivist, multifunctional rural, consumption rural, rural gentrification, second home, rural amenity/lifestyle migration, rich access to study the rural settlements, based on the selection of subject words, was retrieved in the SSCI in the web of science database, and the relevant literature from 1995 to 2022 was screened. The proper term for domestic rural housing is homestead, which is distinguished from the selection of the theme word "rural housing" in foreign literature. The theme words of Chinese literature include "rural settlements" and "homestead", supplemented by themes such as "reverse urbanization", "new rural construction", "rural revitalization" and "ecologically livable countryside". Based on the selected theme words, search the CNKI database and filter the relevant literature. By filtering out relevant literature, converting and processing data, and drawing maps using software.

## 3. Research on International Rural Settlements

### 3.1 The evolution of hotspots

The change of annual volume of articles can reflect the trend of research topics in relevant fields. Based on the relevant literature obtained from screening, a statistical map of the number of documents issued from 1995 to 2021 is drawn. As shown in Fig.1, the number of documents issued in the relevant research years from 1995 to 2004 fluctuated up to 15 articles, and the research results at this stage were

relatively stable. The number of articles published in the relevant research years in 2005-2016 showed a fluctuating increase, which was relatively large, indicating that the relevant research of rural settlements gradually received Attention; the number of relevant research articles increased rapidly from 2017 to 2021, peaking at 214 in 2020, and the research of rural settlements is attracting widespread attention. Based on the analysis of the statistical results of the annual volume of relevant literature, this paper divides the research of rural settlements into three stages. The first stage is the stage of stable development from 1995 to 2004, the second stage is the wave growth stage in 2005-2016, and the third stage is the stage of rapid rise from 2017 to the present.

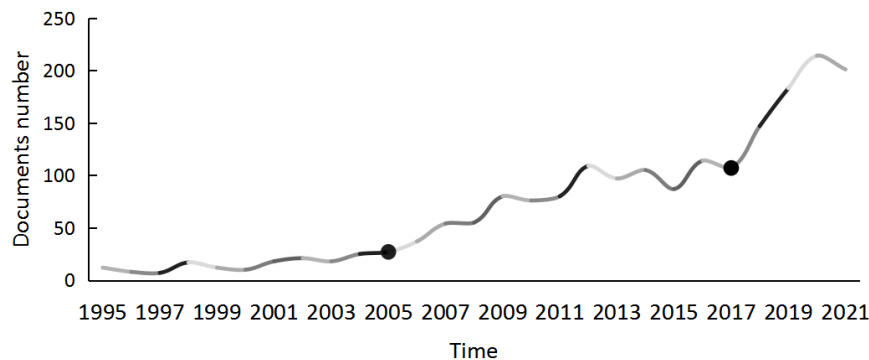


Figure 1: Statistical chart of the number of documents published annually in 1995-2021

In order to clarify the development process of rural settlements, taking the quoted literature and keywords as the object, the literature is produced with the lead timeline map and the keyword map. Judging from the timeline map of the literature, the whole rural settlements have experienced a trend from spatial differentiation, globalization to rural multifunctional transformation. According to the division of the research stage, this paper analyzes the research hot spots and directions of rural housing in the slow rise stage, to the wave growth stage, and then to the rapid rise stage, as shown in Figure 2.

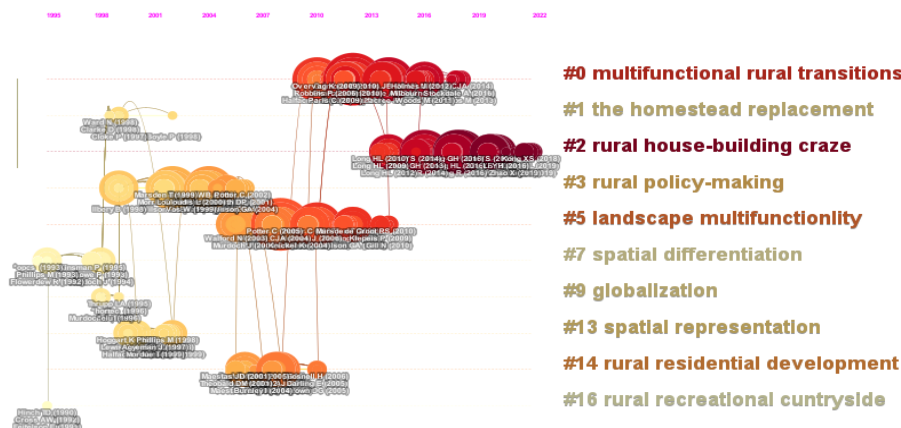


Figure 2: Literature co-cited time line knowledge map in 1995-2022

The first stage (1995-2004) is the slow growth study stage. According to the national cooperation network map, the research results of rural settlements are mainly concentrated in the United Kingdom, the United States, Canada, Australia, the Netherlands and other Western countries in the first stage, of which the United States, the United Kingdom and Canada occupy a central position. During this period, the number of nodes is relatively small and the connection between nodes is weak. During this period, the research hotspots mainly focused on migration, policy and other directions. The thickness of the annual ring varies significantly, and the research content is strongly focused. International rural areas are undergoing policy reforms, and rural gentrification, comfortable migration, and second home research have emerged but have not received widespread attention. With the cultural turn of geographical research, the research of rural settlements has begun to shift from settlement morphology and scale analysis to more attention to human factors, resource allocation, changes in family structure, discussion of social class issues, and community value excavation<sup>[12]</sup>. Urbanism believes that rural

social and economic transformation is an urban-centered process<sup>[13]</sup>, it is an organizational principle to study the urban hinterland and surrounding rural areas to meet urban needs<sup>[14]</sup>. The development of rural housing and related goods and services are caused by the desire of the middle class for a certain lifestyle<sup>[15]</sup>. Dahms summarized the reasons for the rebound in rural areas of the United States, the United Kingdom, Australia and Canada, and found that immigrants are increasingly pursuing quality of life and rural lifestyles<sup>[16]</sup>. Therefore, the development of rural areas is inseparable from the impact of urban migration. For rural areas of advanced industrialized countries, encouraging new people to join has become an important measure for rural multi-functional transformation. With the help of the new class force, it can stimulate the entrepreneurial spirit of local residents, so as to change the rural accumulation system<sup>[17]</sup>. Paquette believes that agricultural production has left large tracts of land to other functional sectors, and rural areas are becoming the habitat of more and more urban immigrants, and stressed the need to study the complex and diversified development of local landscapes with the development of social dynamics<sup>[18]</sup>. Under the background of increasing global mobility, the population has shown a preference for rural mobility. Rural consumption space has gradually been externalized, and rural residential space has gradually been opened to recreational and leisure activities. During this period, due to differences in geographical conditions and uneven distribution of resources, the heterogeneity of rural space development has been obvious.

The second stage (2005-2016) is the wave growth study stage. At this stage, the research field is mainly concentrated in the United States, the United Kingdom, Australia, China, the Netherlands, Spain and Canada. The intensity of inter-nodes has gradually increased. During this period, the number of documents sent by the United States and the United Kingdom has increased significantly and is still at the center. At the same time, the number of developed countries has increased significantly and gradually expanded to developing countries. During this period, research hotspots mainly focused on land use, migration, rural development and other directions. After the precipitation of the first period, the research related to immigration has risen sharply, and the difference in the thickness of the annual round has narrowed. The research content has begun to be scattered from the themes of policy and immigration, and the research on land use, landscape, mobility and diversity has gradually highlighted. With the development of agricultural modernization and intensification, the countryside has formed a homogeneous landscape. Along with it, the social demand for non-commodity functions is gradually increasing, and the value of the landscape has attracted attention. The government department pursues to establish a compensation mechanism through non-commodity demand to deal with the emerging agricultural model<sup>[19]</sup>. At the end of the 20th century, the structural reform of European agriculture led to the idleness of a large number of farm buildings. Through the reuse of farms, more than half of the farm buildings in the Netherlands no longer have agricultural functions and have transformed into places for residential and non-agricultural economic activities, becoming an important role in shaping rural landscapes and promoting sustainable development<sup>[20]</sup>. It can be seen that with the development of rural industry, rural space has been given a deeper spiritual connotation, and the rural life of "idyllic poetry" has become a beautiful lifestyle conceived by people. As an important feature of the rural landscape<sup>[21]</sup>, cultural heritage and traditional architecture are combined with the natural landscape of plants and organisms to form a diversified rural landscape, which has become a favorable factor for promoting the multi-functional use of rural landscape and providing a variety of goods and services<sup>[22]</sup>. As a result, the consumption and protection value of rural areas is increasing day by day, and the value of production is no longer the only pursuit of rural development<sup>[23]</sup>. Different time, space and value combinations lead to complex development models<sup>[24]</sup>. Holmes proposed a multi-functional rural transformation, believing that the rural space is gradually occupied by market-driven consumption functions. Some rural areas with rich infrastructure have shifted the focus of supporting the primary sector to meeting the construction of "consumption and entertainment", so that the rural landscape has become potentially multi-utilitarian<sup>[25]</sup>. Almeida believes that the arrival of migrant migrants has changed the direction of rural investment, stimulated new consumption habits, obtained high sources of investment, and enhanced the entrepreneurial spirit of local residents, thus improving the competitiveness of rural areas<sup>[26]</sup>. Therefore, the pursuit of natural facilities has also become one of the main driving forces to change human living patterns<sup>[27]</sup>.

The third stage (2017-present) is the rapid growth study stage. The third stage mainly focuses on China, the United States, the United Kingdom, Australia, Spain and Italy. The number of nodes has greatly expanded, and the connection between nodes is strong. This stage continues to maintain the research hot spots of the first and second stages, and on this basis, the research on management models has been increased, and the research results of developing countries dominated by China have soared. Unlike the stage of large-scale migration and multifunctional development in Western countries, developing countries are in the early stages of rural transformation. China's countryside is constantly

integrating into the process of global development. With the continuous expansion of rural settlements, the reconstruction of rural space is urgent. As a tool to regulate the policy of linking the increase and decrease of urban and rural construction land and an important asset for farmers, the identification and utilization of its functions has an important impact on promoting rural reform, as shown in Figure 3 and Figure 4.



Figure 3: National cooperation map of rural settlements study in 1995-2022

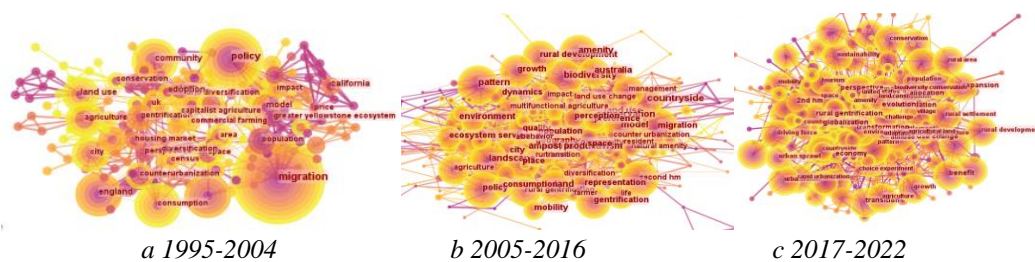


Figure 4: Keywords knowledge map in 1995-2022

### 3.2 Analysis of hot Journals

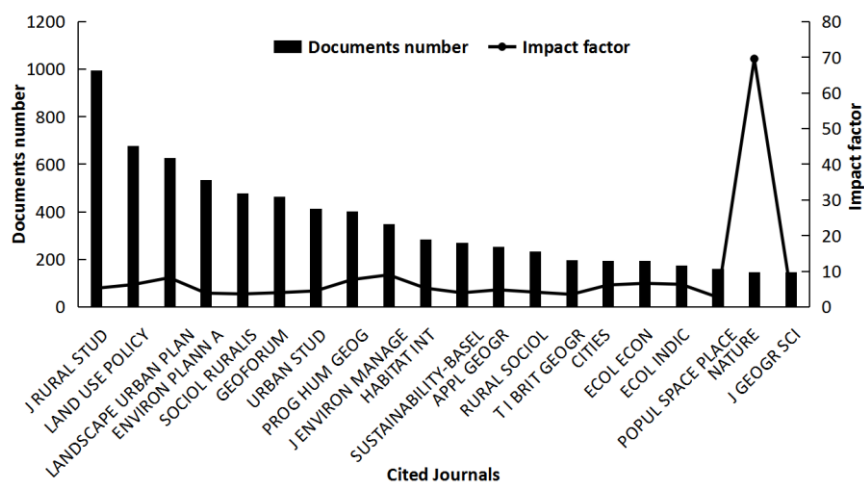


Figure 5: Distribution of hot journals on rural settlements in 1995-2022

This chart lists the top 20 journals on the research achievements of rural settlements, of which the largest Journal of Rural Studies, with 995 articles. The journal mainly covers geography, environmental science, agriculture, sociology and other research directions. Secondary, the number of articles of Land Use Policy, Landscape Urban Plan, Environ Plann A, Sociol Ruralis, Geoforum, Urban Stud, Prog Hum Geog journals published has reached more than 400. The impact factors of Landscape Urban Plan and Prog Hum Geog journals are 8.119 and 7.602 respectively, with high influence. The journals listed mainly belong to the field of geography and environment. Some journals, such as Habitat INT, Rural Sociol, Cities, Ecol Econ, Popul Space Place, Nature, deal with ecology, urban research, demographics and other multidisciplinary fields. From the perspective of the disciplines of the journal, the relevant research in rural settlements is mainly research objects in geography, sociology, environmental science and other disciplines, and lacks cross-integration with disciplines, as shown in Figure 5.

### 3.3 Subject word extraction

The participation of multiple subjects has promoted the expansion of rural settlements and the change of rural residential landscape and functions. Differences in housing preferences between different subjects have reshaped the rural material landscape and triggered a series of school, retail, infrastructure and other migrations. At present, scholars mainly expound the research on rural housing in terms of rural gentrification, second home and convenient migration, and analyze how the mobility, housing preferences and other factors of migrant groups affect the functional value of the house from different angles, so as to realize the change of the rural landscape. This article mainly expounds the changes of rural housing under the background of rural spatial diversification from the aspects of the main body of immigration, migration location and residential functional value.

(1) Location preferences. Immigration occurred earlier in coastal areas, and then gradually expanded to better inland. Most scholars' research attributed migration to the pursuit of natural landscape elements. Finland's "second home" has experienced the transfer from seaside villas to inland villas, then to areas with rich leisure activities or areas with national cultural symbols near the lake area<sup>[28]</sup>, reflecting the generalization of the demand for rural leisure space with the development of social economy. Russia also has the tradition of "second residence". Due to historical factors, rural villas around the city are the privilege of groups with social status, Villa culture is deeply rooted in the hearts and minds of the people. With the development of social economy, more urban residents have begun to pursue "second residence", House", a large amount of suburban farmland is used for villa construction, forming a unique rural landscape<sup>[29]</sup>. Ghose analyzed the demographic, economic and social changes in the Rocky Mountains of the United States, believing that the countryside is a choice for the middle class to be close to the wilderness and stay away from chaos and through the description of the changes in housing taste in the Rocky Mountains, and expensive large single-family houses have become the local housing landscape<sup>[30]</sup>. Smith proposed "rural greentrification", which explores immigrants' preference for "green" residential space by analyzing the environmental changes in two different villages in West Yorkshire, England. Early immigrants retained rural landscapes or represent the background of the times. If the cultural landscape is attractive, or pursues a sense of loneliness away from socialism, you will choose to be located in a more remote location in the village<sup>[31]</sup>. From the location preferences of immigrants, it can be seen that the migration is greatly influenced by the national historical and cultural background, showing a sense of attachment to culture, and the location characteristics reflect strong exclusivity and weak community awareness. At the same time, the migration group ranks gradually expanded from elite groups to ordinary residents.

(2) The participation of diverse class. Retirees are considered to be the main group for early migration to rural areas, mainly rural leasing with better service facilities, and healthy living as the main purpose of migration. Smailes believes that with the occurrence of retirement, long-distance commuting and lifestyle migration, although the social composition of rural areas is more diversified, external migration<sup>[32]</sup>. The emigrant has exacerbated the aging of the population in the region. With the continuous improvement of transportation roads and the diversification of working forms, the rural areas around the city have gradually injected young people. At the same time, with the transformation of the consumption direction of urban residents and the development of rural tourism, rural life has become a specific cultural experience, attracting a large number of elite groups of entrepreneurs and artists. With the diversification of the purpose and mode of migration, the migration group is no longer limited to groups with higher social status. In specific areas, students have also become one of the groups of migration<sup>[33]</sup>. The commercialization of rural space has intensified the capitalization of housing and attracted the arrival of real estate developers, professional agents and service personnel. Such groups participate in improving the housing structure. Different from the above-mentioned migrant groups, it is an "involuntary" purpose of migration. Many people participate in rural construction to form a new rural landscape.

(3) Housing value and function. With the development of rural backward productionism, the spatial value of rural areas has gradually emerged. The emotional value, entertainment value, aesthetic value and cultural heritage value of rural housing have been continuously excavated. Buildings with agriculture and animal husbandry as the main functions have realized the transformation of functions, and agricultural production has gradually given way to leisure and entertainment. European and American countries have emerged a trend of buying major or secondary houses with aesthetic, recreational and other use value in rural areas<sup>[34]</sup>. This phenomenon is regarded as yearning for a natural, leisurely lifestyle or refuges that pursue their hometown feelings and stay away from the city<sup>[35]</sup>. It is an important part of rural pastoral life and the embodiment of the township of urban residents<sup>[36]</sup>. For rural areas where there is population migration, local residents will improve the value of the house

by improving the physical space of the house, obtain investment income, such as adding new rooms, demolishing the inner wall, or completely rebuilding their homes, and reusing agricultural ancillary buildings such as barns and shacks<sup>[15]</sup>. Buildings originally used for agricultural functions, such as barns, farms, cellars, etc., have excavated new functions with leisure projects. For example, the cellar used to store grain is used as a wine cellar for display, the farm has been converted into small villas, and historic landmark buildings have been protected and developed. In the Netherlands, most of the idle farms have been converted into small villas, combining the characteristics of the farm with modern buildings to build private gardens; some farms are used for commercial functions and become incubators for enterprises, such as restaurants, construction industries, etc.<sup>[20]</sup>. Urban elements continue to penetrate into rural residential buildings, and architectural functions continue to diversify.

#### 4. Research on domestic rural settlements

With the introduction of China's rural revitalization strategy and the implementation of the new rural construction policy, encouraging multi-stakeholder participation is now a priority. In 2015, China began the pilot reform of rural homesteads, involving 33 counties across the country, mainly focusing on the "separation of powers" to explore the voluntary withdrawal mechanism of homesteads. With the continuous deepening of the pilot, the first document of the Central Committee for three consecutive years from 2018 to 2022 proposed to be based on the experience results of the pilot. The basic rights and interests of the people should revitalize the right to use rural homesteads and houses. In 2020, the state will continue a new round of reform pilots, continuously deepening the reform content on the basis of expanding the scope of reform, involving 104 counties and cities, and constantly exploring the utilization and realization of homesteads and housing. While exploring the homestead system, in 2017, the Ministry of Finance launched a pilot project for the construction of pastoral complexes in 18 provinces, of which the realization of leisure agriculture is one of the contents of the pilot. With the help of the unique spatial landscape of ecology, production and life in various places, explore the path of combining industry and rural settlements, industrial integration to build a livable and livable countryside. This article will divide the research on homesteads into 1998-2014, 2015-2018 and 2019-present according to the reform pilot of homesteads and the time proposed separation of powers.

The first stage of the research hotspot mainly focuses on the exploration of land consolidation and farmers' exit mechanism. The research direction is relatively concentrated. At this stage, the economic function of the homestead has begun to appear, and it has begun to explore institutionalization. China's homestead has long been focusing on ensuring the living and living functions of farmers. Due to the system of "free application and restriction of circulation", the large-scale loss of labor, a large number of homesteads are idle and abandoned, and the area of homesteads has not decreased with the loss of rural population. On the contrary, it has caused a large number of residential wastes, and the phenomenon of "hollow villages" is highlighted, which not only causes a waste of resources, but also hinders the further development of the countryside. Under the dual pressure that the demand for urban construction land and the area of cultivated land are not reduced, the effective use of homesteads has become the key to alleviating the problems of urbanization and food security. The state balances the demand for land for urbanization through land consolidation. The intensive use of homesteads has become one of the main contents of land consolidation. Long emphasizes that unused housing in the "hollow village" is a challenge in the context of urban development and food security. There is a serious tension between urban development and farmland protection, and the location of the "hollow village" is very important<sup>[37]</sup>.

In the second stage, the research hotspot gradually expands to the system, circulation and functional differentiation of homesteads. At this stage, the state began the pilot reform of homesteads to explore how to highlight the capital value of homesteads, revitalize "sleeping resources" and increase farmers' income under the premise of protecting the basic rights and interests of farmers. Due to the differences and imbalances in topography, regional economy and industrial development, the utilization of homesteads shows different development models in space and function. For a long time, China's homestead owners have residential and production functions. With rapid urbanization, the asset income function of urban villages and suburban villages has been continuously enhanced. The total number of homesteads will expand with the development of the economic level, and the functional value will be highlighted<sup>[38]</sup>.

The third stage of research hot spots are constantly scattered, mainly discussing homesteads, separation of powers and rural revitalization. With the introduction of "separation of powers", the exploration of the internal mechanism of the system and the implementation path has become a hot



topic for scholars. As one of the "three plots" in rural areas, homestead has the potential value as a container for carrying economic activities. The rational and effective use of homestead is a way to develop new industries, realize industrial integration and gather talents. With the development of industrial economy and characteristic economy, "professional villages" have emerged and expanded rapidly. The development of industry has different effects on the spatial pattern and utilization mode of settlements. The development of traditional agricultural villages, industrial villages, tourism villages and other characteristic towns has made housing no longer dominated by a single function, and functional differentiation is becoming more and more obvious. Jiaolin believes that it is necessary to strengthen the perception of rural identification and empty waste, build an evaluation and use guidance system for homesteads, and emphasizes to face up to the impact of village population movements on the empty waste of physical space<sup>[39]</sup>. Population restructuring and industrial restructuring are the key factors for the development of settlements. At the same time, the ambiguity of China's land system for homestead property rights is the biggest obstacle to the effective use of homesteads. In order to meet social and economic development and the living needs of farmers, the homestead system has undergone a reform from single property right to the separation of dual rights, and then to the separation of three powers<sup>[40]</sup>. With the continuous deepening of pilot reform and rapid cities with the implementation of the new rural construction policy, the asset value of rural housing in China has gradually emerged, and the construction of ecologically livable villages has become an opportunity for sustainable rural development in China. At the same time, the proposal of "separation of powers" provides policy support for the exploration of the multi-functional utilization of homesteads. Shuangshuang believes that in the current large-scale village relocation and communityzation movement, the homogenization of housing construction is extremely prominent. Traditional architectural elements, architectural forms and architectural structures have been abandoned, and the diversity and regional nature of rural settlements have been damaged<sup>[41]</sup>. While shrewd shrinking of homesteads, it also we should pay attention to the sociocultural values of the countryside, as shown in Figure 6.

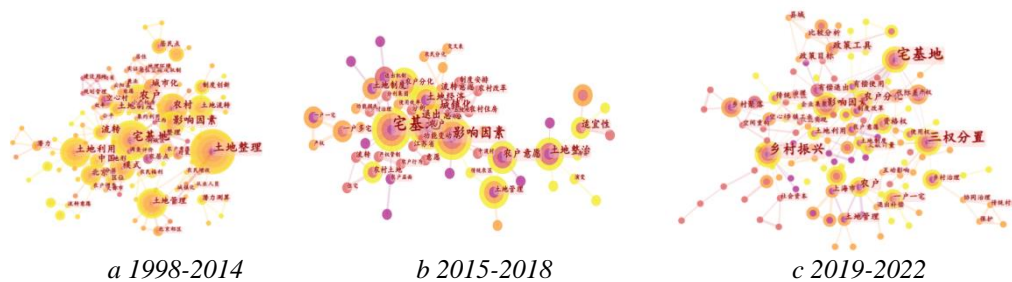


Figure 6: Keywords knowledge map in 1995-2022

## 5. Prospect

Therefore, China's homestead carries rural history and culture. Identifying and excavating homestead functions is an important tool to achieve national political stability and social security, express the homesickness of urban residents, and meet the livelihood needs of farmers. At the same time, it ensures the sustainable development of the ecological environment, and reasonably analyzes the diversified utilization paths of homesteads in combination with population mobility, farmers' livelihoods and village industrial development, which is very important for rural development.

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