

2014

BioTechnology

An Indian Journal

FULL PAPER

BTAIJ, 10(22), 2014 [13861-13867]

Study on scale of rural communities for transmigrator resettlement in southern Shaanxi based on sustainable development

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ABSTRACT

Taking rural communities constructed under the background of transmigrator resettlement in Southern Shaanxi as an object of study, on the basis of summarizing issues on construction of communities for transmigrator resettlement in Ankang during the past three years, this paper set proper positions for rural communities constructed under the background of resettlement project, analyzed the impact imposed by supplementary facilities, industrial structure, ecological protection, sense of belonging and identity held by residents and community administration onto scale of resettlement communities from sustainable development on economic, ecological and social aspects, established the hierarchical system for scale of rural resettlement communities in Southern Shaanxi combined with the current standard for scale of village in Shaanxi Province, and provided theoretical and practical reference for resettlement projects in Southern Shaanxi.

KEYWORDS

Transmigrator; Rural communities; Sustainable development; Scale.



INTRODUCTION

Southern Shaanxi (Figure 1 Location of Three Cities in Southern Shaanxi) is the southern area of Shaanxi Province, located in south of Qinling Mountain with a total area of 74,017 square kilometers, including Hanzhong, Ankang and Shangluo and having jurisdiction over 28 counties (districts). It is one of the three agricultural and natural ecoregions, enjoying diverse biological population, good natural resources and ecological environment. However, social and economic development in this area is lagging behind due to poor communication with the outside world under ambient occlusion obstructed by Qinba Mountains. In particular, economic development in rural areas is at a standstill subjected to traditional structure of rural production giving priority to subsistence, where a considerable number of farmers still live below the poverty line. Young adults go out to work, leading to a serious imbalance in the village population, where hollow village serves as prominent phenomenon. Infrastructure and public facilities lags behind in development and living environment is in poor conditions, which are in an urgent need for improvement. Hidden dangers resulted from geological disasters mainly including landslide, avalanche and mud-rock flow in Southern Shaanxi are in a great number, wide distribution, large density, high density and serious hazard, which threaten lives of the masses and restrict economic development in local areas. In order to prevent disasters, relieve poverty and improve quality of the living environment in Southern Shaanxi, Shaanxi Province launched the relocation and resettlement project in southern Shaanxi in 2011. From 2011 to 2020, 2,400,000 people will move - a number larger than 25% of total population in three cities, who are mainly farmers. As the important carrier for urban and rural development under an overall plan, urbanization, strengthening public services and promoting basic public services, new-type rural community not only takes on functions for inheriting traditional culture in rural areas, but also functions for gathering population and economies^[1], which is suitable for development of resettlement project and overall planning for urban and rural areas in Southern Shaanxi. Strategies for urbanization development constituted in 18th CPC National Congress guide development and construction of urban areas shifting from pure urbanization towards new-type urbanization, from land urbanization towards population urbanization, which provide good policy guidance for development of urban and rural areas in Southern Shaanxi. With continuous progress of new-type urbanization, combination of resettlement and urbanization is gradually forming a large number of new-type rural communities. Construction of new-type rural communities has already become the focus of recent construction in urban and rural areas of Southern Shaanxi.

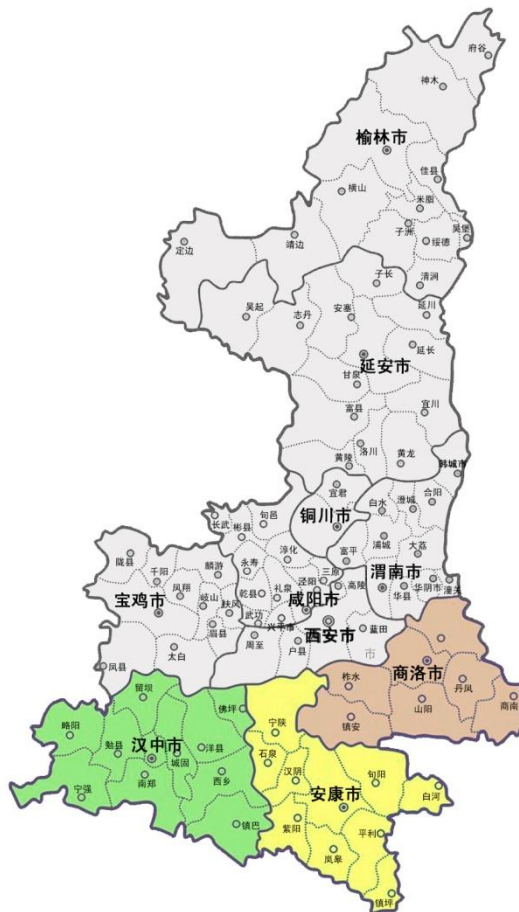


Figure 1 : Location of three cities in southern Shaanxi



Figure 2: Administrative map of Ankang

PROBLEMS EXISTING IN CURRENT CONSTRUCTION OF RURAL COMMUNITY FOR TRANSMIGRATOR RESETTLEMENT

Since 2011, great progress has been made by Southern Shaanxi in relocation and resettlement of transmigrants and a number of resettlement communities have been set up one after another in different areas. We conducted our investigation with Ankang (Figure 2 Administrative Map of Ankang) as the object. From 2011 to 2013, taking disaster prevention and poverty relief as the crucial grip for overall planning urban and rural development and promoting the process of "triple-nization", under which the "6663" working idea for disaster prevention, poverty relief and relocation had formed, Ankang proposed the five-in-one working requirements including "industrial park, transmigrator relocation, indemnificatory housing, farmers into the city and urban construction", and built communities under the modes of dismissing groups to set up community, dismissing village to set up community and set up independent administrative regions according to administrative division, where construction of resettlement community is basically involved in villages and towns of one region and 9 counties. By the end of 2013, there were 767 demonstration communities with more than 30 households at municipal, county (region) and town (office) levels, which are expected to resettle 128,000 households (486,000 people), representing more than 50% of the total relocation task for the whole city in 2010, where there were 465 communities with 30-100 households for each one, 280 communities with 100-1000 households for each one and 22 communities with over 1000 households for each one (Figure 3 Household numbers and community numbers of resettlement communities in Ankang). At present, following problems still exist in communities under construction or having been constructed:

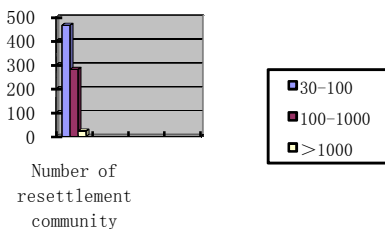


Figure 3 : Household numbers and community numbers of resettlement communities in ANKANG (as of 2013)

1. Great difference in scales of communities, not easy to unify supporting settings and many communities are short of functions on social service. Now, all resettlement communities with more than 100 households have planned and constructed community facilities; most resettlement communities with households less than 100 haven't planned separate public facilities which however are within the coverage area of public facilities in other communities. For resettlement communities with 30 households in each one, it is hard to set up service facilities and unify the supporting standards.

2. Insufficient economic functions, leading to more serious exodus, 50-60% of people go out to work in many communities, where hollow community serves as prominent phenomenon. Some communities have been built with the industrial park, for example, Yaofugou Community, Chengguan, Pingli; Hengkou Fenghuang Resettlement Community in Hanbin District. Some communities have been built together with modern agriculture such as Peijia Community of Cangshang in Baihe which developed the modern agriculture in cooperation with Tianbao Agriculture Development Company. Such communities can solve the employment problem faced by the majority. However, most of the other communities are resettlement-based ones which are lack of appropriate production conditions under a sole industrial structure, where the economic function is relatively insufficient.

3. Strong sense of identity in construction of the community, short of local specialties. Owing to requirements on progress of the project and financing, construction of the community often takes a uniform pattern (Figure 4 Zaoshu Resettlement Community, Baihe; Figure 5: Pengjia Resettlement Community, Baihe), where there are lack of local characteristics and culture in the landscape style.



Figure 4: (Upper one) Zaoshu resettlement community, baihe



Figure 5: (Below one) pengjia resettlement community, baihe

4. Not close enough combination of community construction with development of city and town. Due to urgent requirements of the resettlement work, many communities were built while plans were made. Site selection and conceptual design of the community are unable to coordinate with development of urban system, county, village and town. In Ankang, only Baihe and Pingli have clarified position of the resettlement community by combining with transmigrator relocation during overall urban and rural planning -- an administrative unit between town and village. Baihe has made up the "11135" plan for relocation and resettlement (Figure 6 Baihe 11135 Relocation and Resettlement Plan) and Pingli has made up the stationing pattern for disaster prevention and poverty relief featured as "1 city, 10 towns, 30 communities, 100 new villages".

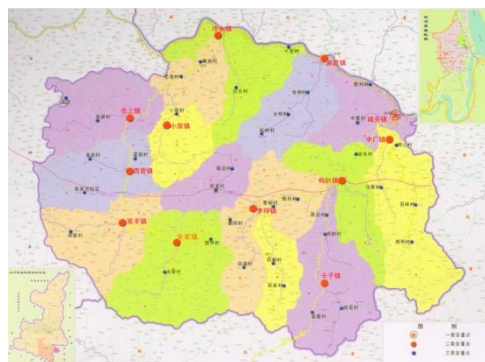


Figure 6 : Baihe 11135 relocation and resettlement plan

To sum up problems mentioned above, we can see that reproduction of village may occur if requirements on position and construction for resettlement community can't be clarified, which will not fundamentally promote overall urban and rural planning and resettlement project. Thus, reasonable position shall be set to identify proper scale of the community before fundamentally solving problems existing in construction of resettlement community in Southern Shaanxi.

POSITION-SETTING AND TYPE OF RESETTLEMENT COMMUNITIES FOR TRANSMIGRATORS IN SOUTHERN SHAANXI

From the perspective of overall planning for urban and rural areas, scope of planning typically includes entire areas within the city and county and there are great difference on transmigrator regions, resettlement modes and others. Therefore, connotation of the resettlement community shall combine with China's current urban system, adapt to different resettlements for expansion and extension. According to current development of the community, there are two levels of communities

including independent ones between town and village and ones relying on village. Independent communities between towns and villages include resettlement communities in the town area under construction, service-oriented resettlement communities set up relying on industry and centered resettlement communities on the edge of town; Communities relying on village refers to those resettlement communities having been developed on the basis of the original village or a group of the village.

DISCUSSION ON SCALE OF RESETTLEMENT COMMUNITIES FOR TRANSMIGRATORS IN SOUTHERN SHAANXI BASED ON SUSTAINABLE DEVELOPMENT

Road Sadie mentioned in the science on human settlements that "scale of inhabited population depends on service provided and role played for its own residents and entire settlement system. scale of land used for inhabitation depends on its population scale, function, role and landform location in the settlement system."

Based on sustainable economic development

To discuss scale of the community from economic efficiency of the supplementary facilities

To determine appropriate scale of the community shall take full account of community service network, rationality and economic efficiency of coverage of the administrative network, i.e. make a certain number of people support the facilities setting to improve efficiency and service level of facilities and save costs on construction and maintenance, make the facilities setting have appropriate range of service to realize convenient use.

Learning from urban residential areas, determine the scale according to reasonable degree of supplementary technology for infrastructure. "1000 people index" shall be adopted for standards on public supplementary facilities, where different scales of population shall be set if facilities of residential areas, housing estates and groups are different.

In conjunction with practice and experience on construction of other rural communities, supplementary facilities of communities mainly include administration station, clinic, cultural activities room, nursery, commercial outlets and etc. Supplement of facilities in communities will refer to current standards on facilities setting for villages and urban communities in Shaanxi, where facilities settings are also divided into levels based on population scales.

TABLE 1 : Indicators on public supplementary facilities for village in Shaanxi province

Village level Scale classification	Village		
	Center village	Administrative village	Natural village
Large-scale	> 3000	> 1000	> 300
Medium-scale	> 1000 < 3000	> 300 < 1000	< 300
Small-scale		< 300	

TABLE 2 : Classification of planning scales for villages in Shaanxi province

Scale	Per capita floor space index (SQM / person)				
	Administration station	Educational institution	Culture & technology	Healthcare	Business service
Large-scale	0.2-0.4	1.5-4.0	0.3-1.5	0.1-0.3	0.2-0.6
Medium-scale	0.3-0.6	2.0-5.0	0.5-2.0	0.2-0.6	
Small-scale	0.4-0.8	2.5-6.0	0.8-4.0	0-0.7	

Note: TABLE 1 and TABLE 2 are quoted from "Technical Specifications on Village Planning of Shaanxi" (2008).

To discuss scale of the community from industrial development and sustainable employment

"Able to move, able to settle down and able to get rich" serves as the ultimate goal for relocation and resettlement of transmigrators in Southern Shaanxi. If resettlement work can not maintain people's long-term and sustainable livelihoods and income in well manners, secondary impoverished people and a large number of unemployed persons breaking away from land may appear. Hence, industrial issues are more prominent in construction of resettlement communities. Under the background of transmigrators and new-type urbanization, industries in communities shall consider new way of doing business, i.e. agricultural operation in proper scale, coordinated with industry, business and tourism, where scale of the resettlement community shall be in accordance with scales of industries. For example, service-oriented resettlement community relying on industries, whose scales shall be based on industrial population and service population.

Based on sustainable ecological conservation

Southern Shaanxi is one of the three agricultural and natural ecoregions, enjoying good natural resources and ecological environment. But most districts have little cultivated lands, more sloping fields, thin soil layer, poor quality, low

yield and high ecological sensitivity. Many counties are built on sloping fields or in mountain trenches, where land resources are very scarce. From the perspective of ecological protection, suitability assessment shall be done for lands before determining scales of resettlement communities, including suitability assessment on agriculture and construction features of the land. Such assessment will clarify lands suitable for farming, fruit, forestry, aquaculture and other production, suitable for construction of villages and small towns, quantity, quality and distribution of land resources in irrational use, which will provide scientific basis for specific region on layout of towns and resettlement sites. Besides, we shall calculate reasonable capacity of the population according to ecological carrying capacity of land. For regions with great differences on geographical conditions, lands in the same size could accommodate population in different numbers.

Based on sustainable social stability

To discuss scale of the community from the creation of identity and belonging for community

Social stability is an important objective of building resettlement community. Scale of the community shall be conducive to exchanges and mutual aid, improving residents' sense of identity and belonging to the community and enhancing community cohesion. Residents in a certain area have something in common on cultural practices and cognitive psychology, who are likely to form a sense of belonging and identity. Transmigrators are prone to be homesick. Resettlement community shall create a sense of belonging with the humanity scale to form a stable psychological place. Alexander mentioned the number of households for group making of non-collection-type residential neighborhood in "Architecture Pattern Language" and believed that 8-12 households were in favor of face to face communication. Hall mentioned "social Horizon" in "Hidden Dimension" that facial expressions can be distinguished at about 30-35 meters which act as the scale with significance on social interaction. And this scale is also a scale suitable for people's social interaction in the external space theory issued by Awaro Lutheran. In pursuance of requirements from Implementation Measures for Relocation & Resettlement of Transmigrators in Southern Shaanxi (2011), "according to landform features and living habits of people in Southern Shaanxi, in accordance with the principles of land conservation and intensive use of land, residential land for centralized resettlement shall be less than 0.2 mu/household; residential land for scattered resettlement shall be less than 0.25 mu/household". Taking 35 meters as the boundary scale which serves as the scale suitable for human interaction, basic structural unit appropriate for interpersonal communication shall be 35*35 meters, equal to 1,225 square meters and about the scale of 8-10 households.

To discuss scale of the community from administration

As a social life unit, rural communities for resettlement shall undertake the function of administration for the grassroots. Group of villagers is the smallest administrative body in rural areas of China, which is an organizational form inside villager self-administration community. Affected by geographical conditions, areas for transmigrator resettlement in Southern Shaanxi have villages scatteredly distributed in relatively small scale. Number of households in the villager group shall be about 6-20. From the perspective of administration, the smallest scale of resettlement community in Southern Shaanxi shall be equal to a group of villagers, which shall be combined with current scale (TABLE 1) of village in Shaanxi Province for easy administration.

TABLE 3 : Hierarchy on scales of rural communities for resettlement in southern Shaanxi

Scale levels of resettlement community	Number of households	Population	Facilities configuration	Remarks	
Community relying on village	Small-scale	8-10	30-50	Management agency	Equivalent to group of villagers
	Medium-scale	64-75	250-300	Clinic, cultural center, library, regulatory agency	Equivalent to a small village
	Large-scale	75-300	300-1500	Clinic, cultural center, library, regulatory agency, childcare center, social security facilities	Equivalent to large and medium-sized village
Independent community between town and village	Small-scale	64-75	250-300	Clinic, cultural center, library, regulatory agency	Equivalent to a small village
	Medium-scale	75-300	300-1500	Clinic, cultural center, library, regulatory agency, childcare center, social security facilities	Equivalent to large and medium-sized village
	Large-scale	300-1500	1500-7000	Clinic, cultural center, library, regulatory agency, childcare center, primary school, social security facilities	Equivalent of oversize village and residential quarter

CONCLUSION OF RESEARCH ON SCALE OF RURAL COMMUNITIES FOR RESETTLEMENT OF TRANSMIGRATORS IN SOUTHERN SHAANXI BASED ON SUSTAINABLE DEVELOPMENT

Through the above analysis, it can be seen the different influence of sustainable development from different perspectives onto scale settings of resettlement communities. However, "8-10 households" act as a basic scale for a basic unit

within the resettlement community. In this paper, we analyzed the theory and practice on proper setting for scale of rural communities, integrated factors including sustainable development of industries and employment, ecological environmental protection, creation of identity and belonging sense for the community, administration and present conditions of Southern Shaanxi in accordance with economic efficiency of supplementary facilities, and made the conclusion about scales of rural communities for transmigrator resettlements in Southern Shaanxi (TABLE 3). Combined with position setting of the resettlement community, conclusion we made was not a single level and numerical result but a range of values in many levels.

Resettlement project in Southern Shaanxi has been launched for three years. Along with advance of the work, number and types of resettlement communities are getting larger and larger, where problems and contradictions will become more prominent. In this paper, we took scale of community as the research opportunity, began to conduct in-depth research and seek for reasonable way of building resettlement community in Southern Shaanxi.

ACKNOWLEDGEMENTS

Thanks to exchange and discussion made by many colleagues, this paper can be written out. Construction of scale system for community resettlement is based on technical supports provided by some teachers of Architecture School of Xi'an University of Architecture and Technology and information provided by relocation office of Ankang and overall planning office for urban and rural development of Baihe.

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