

Rural Development and Transformation in Germany since the 1950s and Lessons for China

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Summary

Based on a dynamic, regional and cultural landscape analysis, this paper summarizes the rural developmental process and characteristics in Germany since the 1950s, concerning an increase of the labor productivity and landscape change followed by a decrease of the agricultural and farm scale. The four development trends for German rural areas in the future include: high-tech agriculture, renewable energy (bio-energy), rural service industry, eco- and natural parks.

On the basis of the experiences of Germany and recent rural development processes of China, this paper discusses the urban-rural integrative development path of China as follows: formulating and improving the rural development policy, integrative planning framework and action plan; encouraging participation of the residents in rural planning; urban-rural integration including rural urbanization, modernization of infrastructure and public facilities, preserving the rural spatial structure and traditional scenes of others with cultural and historical value.

Zusammenfassung

Basierend auf einer Analyse der regionalen und sozialen Entwicklungen der deutschen Kulturlandschaft beschreibt der Beitrag typische Entwicklungsprozesse im ländlichen Raum Deutschlands seit den 1950er Jahren, u. a. den Anstieg der Arbeitsproduktivität und den Kulturlandschaftswandel, begleitet von der Abnahme der landwirtschaftlichen Betriebe. Vier Entwicklungstrends der ländlichen Kulturlandschaft lassen sich für die Zukunft feststellen: High-Tech-Landwirtschaft, Produktionsraum für erneuerbare Energien, ländliche Dienstleistungsbetriebe sowie Landschaftsschutzgebiete.

Basierend auf den Erfahrungen in Deutschland sowie den Entwicklungsprozessen in China diskutiert der Artikel einen integrativen städtisch-ländlichen Entwicklungspfad Chinas mit folgenden Elementen: Formulierung und Verbesserung von Entwicklungsstrategien für den ländlichen Raum, Einbezug der Bevölkerung in Entwicklungsplanungen, Zusammenwachsen städtischer und ländlicher Räume einschließlich Urbanisierung ländlicher Räume, Modernisierung von Infrastruktur und öffentlichen Einrichtungen sowie Bewahrung der ländlichen Raumstrukturen von kulturellem und historischem Wert.

Keywords: cultural landscape, rural urbanization, rural transformation, new rural construction, Germany

1 Introduction

Germany had become the fourth largest economy worldwide after the rapid postwar industrialization and urbanization. However, unbalanced regional development still exists between urban and rural areas, especially between West and East Germany. Since 1990, the population of some rural areas of the former East Germany has fallen by 20 %, and young people aged between 18 to 19 account for the largest proportion of people who have migrated out of the rural areas. Based on this fact, some scholars proposed the following questions from the aspect of regional planning and regional policy (Henkel 2005): are rural areas of Germany ghosts left over from the past or is it still possible for them to become attractive places for people's future work and life? How can they keep attractive and vigorous in order to reduce resident migration? What industries have investment potential and can achieve sustainable development at the same time? China is also facing the challenge caused by a huge population migrating from inland rural areas to large cities in coastal areas. Therefore, development planning, policy and implementation experience of rural areas in Germany are of referential value to China, which is experiencing the most impressive industrialization and urbanization in the world history.

The development and transformation of the rural areas of postwar Germany experienced three phases: traditional rural areas, rural urbanization and sustainable rural development. German scholars systematically studied the status and function of German rural areas (Henkel 2004a, Grabski-Kieron 2005, Schmied and Wilson 2005).

This paper focuses on the development and change of rural areas of Germany since the postwar period. It compares and analyzes the regional differences of development between urban and rural areas and between East and West Germany and forecasts the future development trends of rural areas in Germany. Combining the status quo of the rural development in China, this paper explores the route to and the policies of urban-rural integration in China.

2 Structural Change of German Rural Areas and Existing Problems

Since industrialization, Germany has undergone tremendous changes in economic structure, agricultural labor productivity, cultural landscape and regional differences.

Most of the population in Germany, all in all more than 82 millions, lives in urban areas. About 33 % of the total population lives in major urban areas with more than 100,000 inhabitants, only 10 % in villages with less than 2000 inhabitants. The share of the gross value added in the agricultural sector was about 1.1 % in 2006. But rural areas still cover more than 2/3 of the whole area of Germany and the agricultural sector is gaining importance for the preservation of cultural landscapes and attractive areas for leisure and tourism.

2.1 Changes in Industrial Structure and Agricultural Productivity

Since 1882, especially after the Second World War (WW II), the industrial structure of Germany has undergone fundamental changes. The proportion of agriculture has been declining, while that of industry and services is rising. Moreover, since the 21st century, the tertiary industry has occupied a dominant position. Take the working population in various industries as an example, since 1925 the industry employment has surpassed the employment in agriculture and the tertiary industry; after the WW II, the employment in the tertiary industry surpassed agriculture employment, ranking the second of all the industries; and since 2001, the employment in the tertiary industry began to surpass that of the second industry, being in the leading position (BBR 2005). For example, the employment in the tertiary industry reached 75 % in 2019.

Since the 1950s the number of farms and the employed population in agriculture of Germany has dropped rapidly, while the labor productivity has risen considerably (Breuer and Holm-Müller 2006). For example, there were more than 1.6 million farms in 1949 and the number fell to less than 270,000 in 2019. In the meantime, the employed population in agriculture dropped from 4.8 million to less than 600,000. Generally speaking, the employed population in agriculture in rural areas is 10 % lower than the total employment population. As a result of technical and biological innovation and agricultural specification, although the number of farms and the employed population decreased, the agricultural productivity doubled. For example, a farmer could support 10 people in 1950, while 140 people in 2009 (Fig. 1).

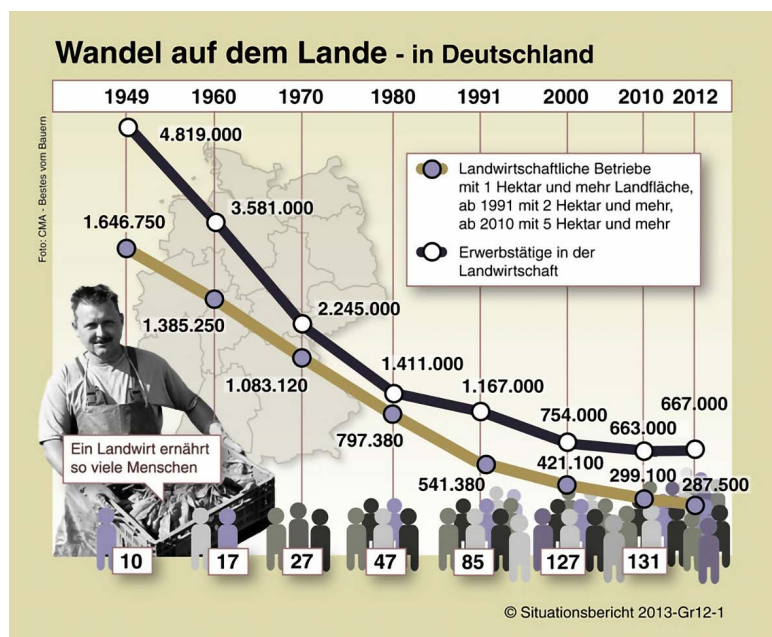


Fig. 1: Downward trend of farm and agriculture employment and increase of labor productivity in Germany since 1949

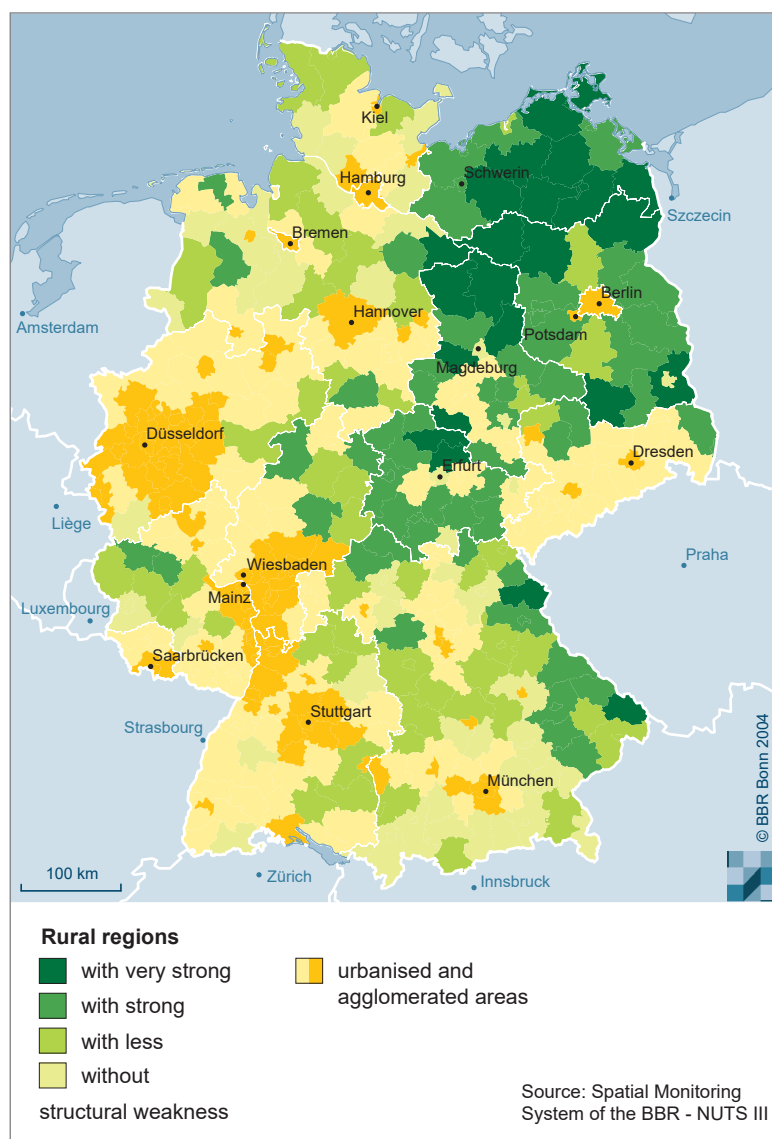


Fig. 2: Typologies and distribution of structural fragile areas in Germany

2.2 Changes in Rural Settlement Structure, Social and Cultural Landscape

Due to the advancement of technologies and the changes in industrial structure and layout, the rural land use, settlement and social and cultural landscape have gone through tremendous changes. Today, most villages have changed the single land use structure, settlement pattern and architectural style formed by agriculture and rural residents. Most villages have lost or changed the typical »social infrastructure« in the past rural areas. For example, there are not any traditional handicraft such as black smith, tailors, shoemakers (Henkel 2004b), but village committees, schools, police stations, shops, hotels, restaurants, etc., which are of some features of modern urbanization.

2.3 Regional Differences of the Development of Rural Areas

The development and problems of the rural areas in Germany are affected by the regional differences of conditions.

Essentially, there are four types of structure in rural areas of Germany (Fig. 2). The most structurally fragile rural areas which are mainly distributed in the northeast have accumulated a large number of problems, such as the migration of residents and economic depression; the structurally fragile rural areas which are mainly distributed in the middle and northeast also have the problem of the migration of residents, but they have potential in tourism and agriculture; the moderately structurally fragile rural areas which are mainly distributed in the old federal states have development potential and capability to create employment opportunities in the secondary and tertiary industries; and most of the rural areas with structural advantages which are mainly distributed in the old federal states are close to urban areas, so they have become attractive living quarters (BBR 2005).

3 An Analysis of Regional Differences of German Rural Development Since WW II

Before WW II, most rural areas in Germany were mainly formed by small farms and farmers, featuring small-scale settlements with simple structure. Affected by the world economy and politics after WW II, the villages in eastern and western Germany embarked on different development paths and had different regional characteristics. West Germany implemented a capitalist economic model since the 1950s. Agriculture was heavily influenced by the agricultural policies of the European Community and the EU, while East Germany implemented a socialist economic model, forming a collective farming model similar

to the former Soviet Union. It has influenced the development of rural areas in German Democratic Republic (GDR) until now.

3.1 The Process and Characteristics of Rural Development in East Germany

After WW II, the cultivated land of large landowners »Junkers« in northeastern Germany was allocated to farmers, but since the 1950s, in accordance with socialist principles, through three steps of land reform, collectivization and cooperative production based on the socialist system, East Germany completed the transformation of private land into collective farms and state-owned farms with large areas of land, central agricultural machinery stations and new settlements. Within four decades, the landscape had undergone fundamental transformations in order to raise productivity (Henkel 2004a). Until today, the huge differences in the average agricultural business units between East and West Germany can still be seen. In West Germany, the average farm covers 5 to 10 hectares of cultivated land, with a maximum of 20 to 50 hectares, while the scale of cultivated land in East Germany can reach 1000 hectares.

The socialist system and farmers' longing for urban life had changed the shape, scale, social composition and management of villages.

In the past, the shape of houses and villages and rural landscape in traditional German villages were quite different. The traditional rural settlements in Germany that means the forms of houses, the forms of settlements and rural landscapes showed a great diversity in former times. We find old, not regular villages which have grown over centuries as well as regions with single farms surrounded by farmland. In regions with bad natural conditions we also find rather new and regular villages from different projects of agricultural colonization.

This great variety of villages has changed during the 40 years of socialism in the GDR to a more uniform type of housing areas in some sense similar to small towns. A typical agricultural production unit of GDR was composed of 5 to 10 residential areas, including a central residential area with infrastructure and public services such as management agencies, agricultural machinery repair stations, schools, restaurants and cinemas. Most of the housing of agricultural workers was akin to the three- to four-story buildings in cities. Although this change was later considered to have lost the original characteristics of rural areas and was partially restored, it had fundamentally changed the original features of the rural areas of East Germany after all (Zheng 1990). Fundamental changes had taken place in the management of agriculture as well. Farmers became agricultural workers with fixed working hours and social infrastructure in residential areas, but they cannot occupy agricultural products alone.

With the reunification of Germany, this socialist system collapsed. Unemployment, uncertainty in the ownership of land transactions, and the difficulty of adapting agricultural production to EU standards resulted in the large-scale migration of population (Fig. 3). After reunification, the remaining agricultural production units were reorganized in a capitalist manner in accordance with the new law and people hoped to re-establish traditional farms akin to those of West Germany, but the results were generally not satisfactory. The reason is simple: in the socialist system, agricultural workers enjoyed similar working conditions as general industrial workers, such as fixed working hours, summer vacations for a few weeks, etc. However, on traditional farms, farmers could not leave the farm for vacation under normal circumstances as there is no others to help him take care of domestic animals or farmland. Agricultural workers who had worked in the socialist system for decades could not adapt to this type of risk-taking work, resulting in the loss of a large population in the less productive north-eastern part of Germany. As many buildings were left vacant and agricultural machinery rusted, villages lost their attractiveness as a place of residence and no one wanted to invest in the unpromising socialist agriculture. For example, the population of agricultural workers fell from 150,000 in 1989 to 20,000 in 1994 in Brandenburg. Statistics in 2006 showed that, except for Saarland, the new federal states of Germany were a region of net population loss. Among them, Saxony-Anhalt had the largest population loss, reaching more than 17,000 people (Statistisches Bundesamt 2008).

3.2 The Process and Characteristics of Rural Development in West Germany

The rural development in West Germany was not as tragic as East Germany. However, with the deepening of the integration of the EU economy, agriculture had become less important. In particular, small-scale agricultural operators could no longer compete with mechanized and industrialized agriculture, and most farmers with only 10 to 20 hectares of cultivated land could not even feed a family. The transformation and development of the rural areas became inevitable. The so-called »Green Plan« after WW II meant the increase of productivity and enable the West-German agriculture to the European market. The decreasing of the number of farms was an indirect effect of these measures. This process was a success because only 2 % of the population was engaged in agriculture, 1/3 in industry, and nearly 2/3 in the increasingly important tertiary industry that focused on production services and research and development.

The development and transformation of rural areas of this kind can be divided into three phases: traditional rural areas, the transformation of traditional rural areas into modernized rural areas, and the transformation of modernized rural areas into sustainable rural areas (Schmied and Wilson 2005, Xiao 2003). After WW II, West Germany carried out the large-scale urban reconstruction, and cities became the centers of economy and residence again. However, affected by the regional policy of equal development of urban and rural areas and locational factors such as land prices and labor, industries

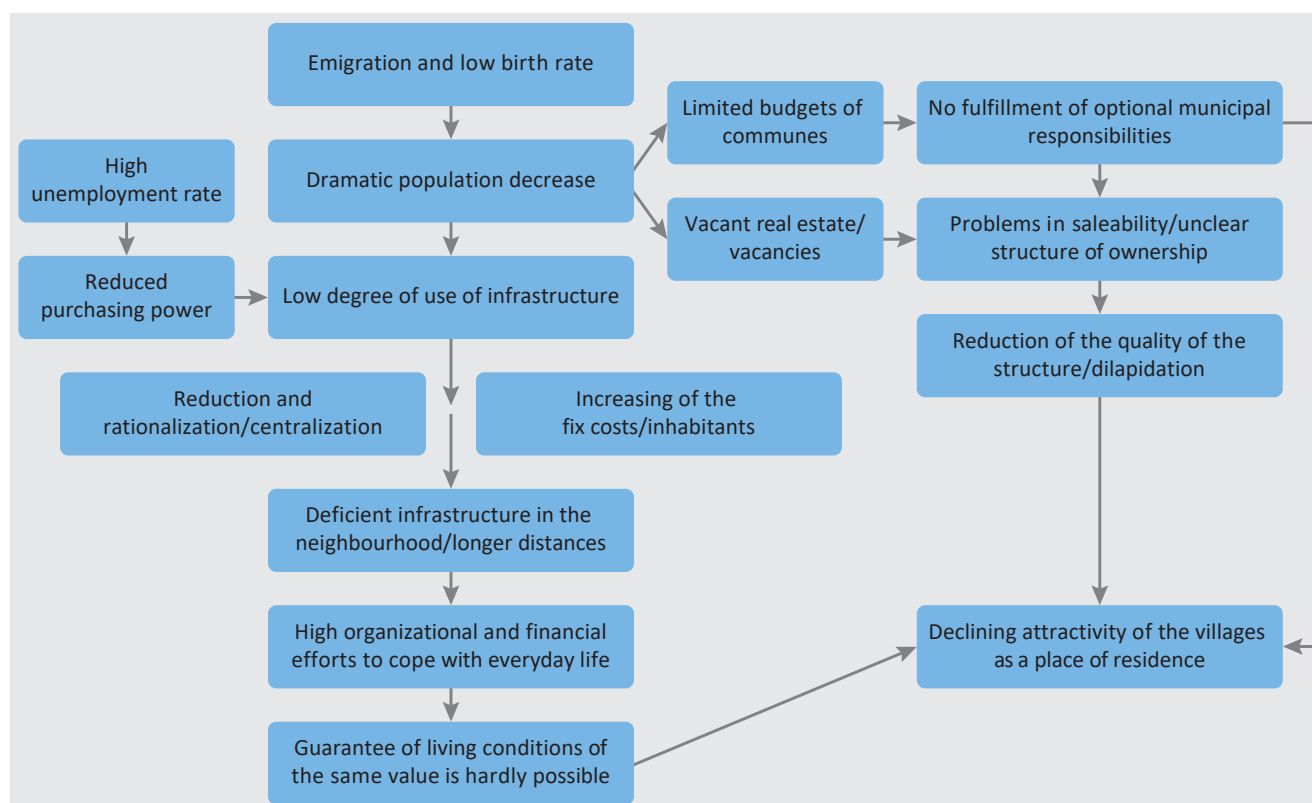
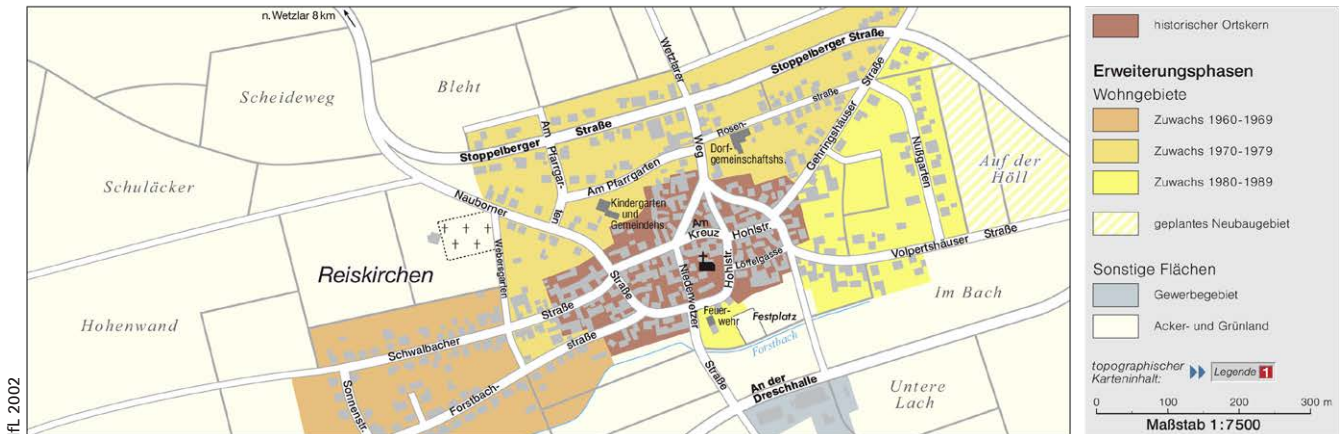


Fig. 3: Decline of collective economy and rural area in East Germany since the reunification

Vom ehemaligen bäuerlichen Haufendorf zum attraktiven Wohnort

Hüttenberg-Reiskirchen (bei Wetzlar)



↑ Fig. 4: Transformation from a small village to an attractive settlement in West Germany

→ Fig. 5: Functional change of a traditional farm house

began to spread to rural areas during the 1960s and 1970s. The large-scale counter-urbanization produced »non-agricultural rural settlements« in the vast rural areas. Due to the popularity of private cars, some urban residents, especially young families with children, moved to »green« rural areas, and infrastructure construction such as large-scale road transportation provided possibilities for this trend. In the process of rural modernization, traditional villages were rebuilt and expanded, and infrastructures such as roads, water, electricity, etc. were built on a large scale, but at the same time, there was a tendency to overemphasize the modernization functions. Straight and broad roads, urban architectural styles and the rejection of traditional elements destroyed the original settlement patterns and natural features of rural areas (Abt 1988, Habbeet et al. 1994, Deisenhofer 1996). After the 1970s, with the awakening of environmental protection and ecological consciousness, Germany carried out the rural transformation of »Our village should be more beautiful«.

The original shape and natural environment of villages, the settlement structure and architectural style, and the internal and external transportation of villages were rationally planned and constructed in accordance with the goal of maintaining rural characteristics and self-



updating. Since the 1990s, the concept of sustainable development has been integrated into village updating and practice, and the value of ecology, culture and tourism and leisure of rural areas has been regarded as important as economy. Some scholars even put forward the

slogan »village is the future« (Milbert 2004, Magel 1991).

Today, most German residents living in rural areas are no longer farmers. They work in the surrounding cities, commuting between their living villages and working cities by private car every day. This rural economic and social development process creates new cultural landscape in Germany-non-agricultural rural settlements (IfL 2002). The past villages have changed their appearance and structure and become attractive settlements (Fig. 4).

As a result of this social and economic process, traditional housing changed its form and function (Henkel 2005). Original farms are now filled with private cars, original stables are turned into shops, and feeding and storing functions of the housing are gradually substituted by commercial function (Arens 2005). The structure of the housing is also complicated: the height and floors increase, and even the decorative style of urban housing is also used for the construction of rural housing (Fig. 5).

The »Integrated Rural Development Plan (IRDP)« of Germany (Fig. 6) had a corresponding structure and system to its spatial plan, i.e., it was divided into several levels, such as the EU, the Federal, states, regions, and municipalities/local governments. The IRDP included different goals and tasks on different levels and also featured the law from macro to micro, from abstract to concrete. Due to the small size of the average land unit in Germany and the different regional conditions between East and West Germany, the core of the regional planning for rural areas was the agrarian structural reform and the main contents were land management and land consolidation.

Generally speaking, a traditional village is not attractive to urban residents. It is difficult to attract urban residents, especially wealthy residents, with the smell of corrals, animal dung, old and dilapidated houses and agricultural machinery. To change this situation, Germany implemented a successful rural development program »Our Villages Should be More Beautiful«, actually renamed »Our Village Gets Future« (Fig. 7). Its main purpose was to make villages more attractive to future new house owners by updating traditional housing. This plan consisted of two levels: the level of regional significance and the object level. As far as the object level is concerned, the plan to beautify villages comprised three aspects, namely to improve the quality and varieties of agricultural products, to promote agricultural real estate and to develop agricultural services or rural tourism, and the concrete measures were also proposed. The plan clar-

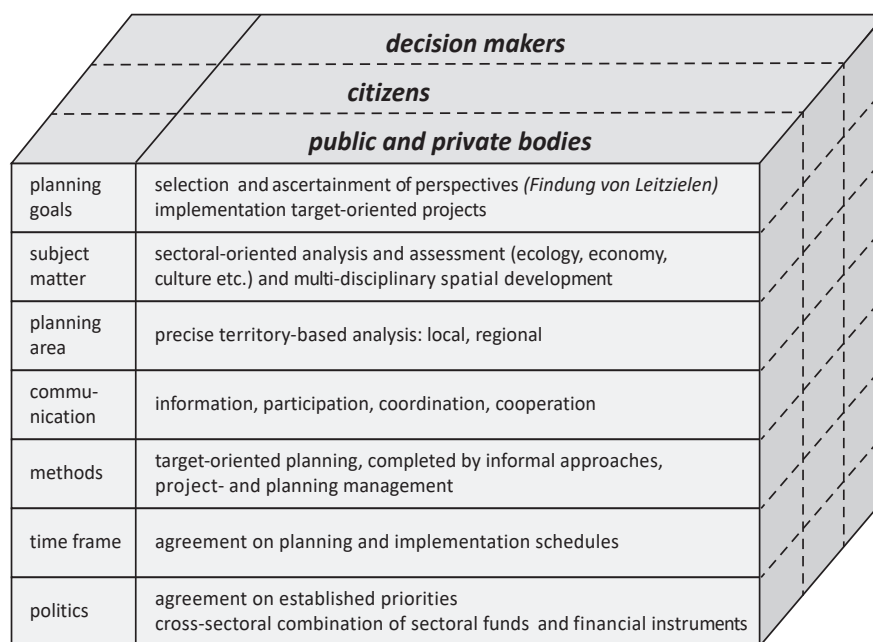


Fig. 6: Integrative development plan and program in rural areas of Germany

ified the following as the major factors to achieve these three objects: the location of villages, their positions in the axis of regional development, the level of agricultural development, the level of planning and implementation, and socio-economic and political factors. This plan was mainly implemented in the central mountainous areas of West Germany in the 1990s, and later extended to other areas and East Germany. Many new ideas were adopted in the renovation of old houses to meet the new need (Arens 2005).

However, it was not enough to change the residential areas and to find out the new uses for old houses. The fundamental problem was to achieve the sustainable development in rural areas, namely, to solve the problems of unemployment, migration of residents and lack of infrastructure in rural areas. There were different solutions to this problem.

4 Future Development and Prospect of Rural Areas in Germany

For the future development path of rural areas in Germany, some experts have proposed four possibilities (see also Grabski-Kieron 2005), which include four perspectives.

4.1 High-Efficiency, Large-Scale and High-Tech Agriculture

Agricultural Silicon Valleys are distributed in parts of Germany, the most prominent of which is located in the southern Oldenburg region. Despite the poor soil and the lack of intensive agricultural development, this region

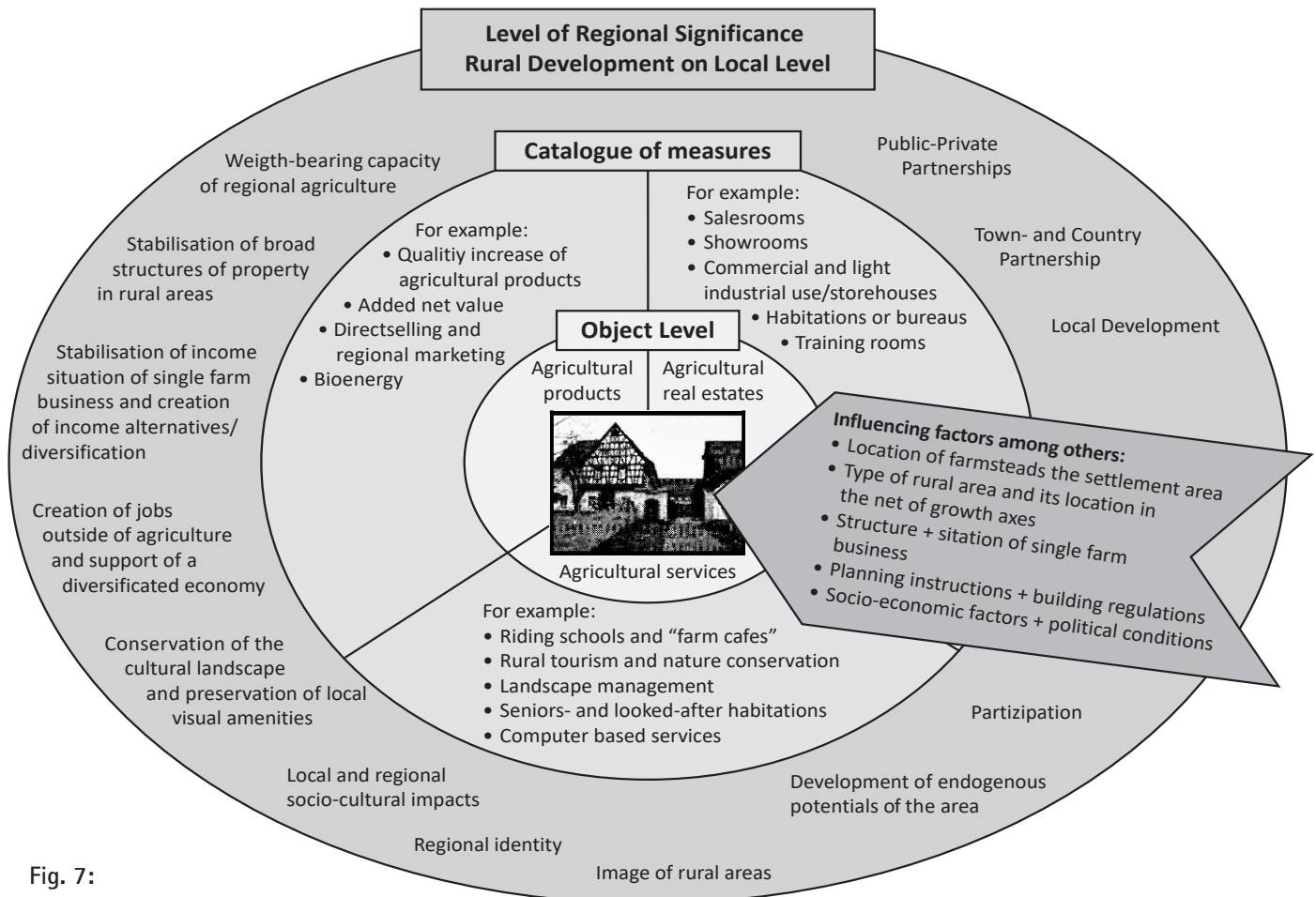


Fig. 7:
The main contents and measures of
the rural development program »Our village should be more beautiful« in West Germany

has developed into a highly industrialized agricultural area through large investments in agricultural technology and capital, producing chickens, eggs, meat and potatoes on a large scale. These big companies are not so much farms or agricultural enterprises as factories. They have successfully exported a full set of agricultural enterprise equipment and modes of business, such as complete chicken farms, fully automated egg production plants, computer-controlled animal feeding equipment, and so on. In economic terms, agricultural development in this region has been quite successful, but large-scale agricultural production has caused serious ecological problems, especially environmental pollution caused by chemicals and animal waste.

4.2 Production of Renewable Energy of the 1st and 2nd Generation

With the current impact of climate warming and the greenhouse effect, the huge challenges facing humanity are how to reduce the consumption of coal, oil and other fossil energy, how to use renewable energy sources such as wind energy and tidal energy, and how to produce clean energy, such as biogas from agricultural products, for small cars. Rural areas can become raw material pro-

duction bases for renewable energy like the United States and Brazil. The sparsely populated region of eastern Germany can develop this type of agriculture in the future. However, how to gain economic benefits from bio-energy plants is still a challenge (Breuer and Holm-Müller 2006, Schmied and Wilson 2005).

4.3 Non-Agricultural Diversification

Some attractive old farms can be used for holiday activities or a second residence. It can be adapted to develop rural tourism for families with children or sell local agricultural products. Another possibility is to build senior nursing homes for the elderly. In rural areas, land, care, doctors and other health infrastructure are cheaper than in cities. Generally speaking, people are willing to live in an area with good natural conditions and no pollution, especially ecologically sensitive people who are willing to live in areas where they can get ecological products. Rural areas can also attract painters, artists and other people with alternative lifestyles who have special spiritual needs.

In economic terms, establishing recreational programs, especially large leisure parks and other leisure and entertainment facilities, is more feasible. The priority areas for

tourism development are often areas with special natural conditions, such as the Alps, the North Sea, and the Baltic Sea coastal areas. Local leisure resorts are distributed between the continuous areas of big cities and urbanized areas. In recent years, a number of amusement parks have been established in some rural areas of Europe, especially in a middle distance from important urbanized areas, such as Disneyland on the outskirts of Paris. There are dozens of high-quality theme parks in Germany, which have become growth industries around big cities. Therefore, amusement parks have certain significance for the development of some rural areas in Germany.

4.4 Construction of Large-Scale Ecological and Natural Parks

Currently, there is no universal solution for the development of old German villages and rural areas. From the perspective of geography, we need to apply different projects in different regions. In other words, we need development projects that can harness local and regional potential. In a highly industrialized and high-tech country like Germany, rural areas cannot only be used to provide agricultural products. Agriculture is increasingly responsible for protecting the diversity of culture, natural landscape and ecology in marginal areas, such as animal and plant habitats. Therefore, some agricultural areas should perhaps be re-established as ecological parks or natural parks to restore the natural features of the original areas.

5 The Enlightenments of Rural Experiences of Germany on China's Urban-Rural Integration

The most charming of Germany for foreigners is not its urban areas, but the rural areas, which are a perfect combination of idyllic scenery and convenient infrastructure and public services. Although the natural conditions, resources, degree of industrialization and social and cultural traditions differ between China and Germany, the re-recognition of the value of rural areas, the policies and practices in the course of promoting rural transformation and development in postwar Germany, including the development of the planning framework and plan system of rural transformation (industrial transformation, ecological transformation and regional transformation), and the implementation of action plans, are still of referential value to the urbanization and urban-rural integration in China.

The theoretical research of urban-rural integration in China is facing the following challenges: (1) Does the land for urbanization and industrialization need to be gained by occupying rural areas? Or can part of rural areas be preserved so as to realize the modernization of rural areas and the two-way mobilization of urban and

rural residents? (2) How are the traditional landscape and the modernization renewal coordinated on the basis of urban-rural integration? (3) What is the driving force for the modernization and sustainable development of rural areas?

5.1 Improving the Policies, Planning Systems and Action Plans Covering Urban and Rural Areas

The development policy for cities in China is to restrict the development of big cities and actively to develop small- and mid-size cities and towns. However, the development of small- and mid-size cities is shadowed by the overexpansion of big cities. Traffic congestion, housing shortages and environmental pollution are getting increasingly serious in big cities (including super cities) in the course of their uncontrollable expansion, while in small- and mid-size cities there is a lack of investment in public services, making them hard to become attractive. The main cause of this problem lies in the influence of groups with vested interests and the investment focused on big cities. Infrastructure and public facilities are highly intensive in big cities, which results in the relatively poor life quality and the comparatively scarce public facilities and development opportunities in small- and mid-size cities, so it is hard for small- and mid-size cities to become irresistibly attractive for residents from rural areas and small- and mid-size cities. Therefore, it is the fundamental measure to solve the city problems in megacities and also the core content of urban-rural development policy to reduce the over-investment in public services and facilities in big cities, especially in megacities.

Land use and land consolidation in rural areas have been included in China's planning system of city and land use, but the architectural and landscape planning has not been incorporated into the legal planning system, which directly results in the difficulties in protecting and using villages with traditional and cultural values and also affects the inheritance of cultural traditions of all rural areas. In addition, the development of rural areas is still lacking in instructive development plans and action plans, especially the operational, stable and standardized financial support policies for rural development, which has led to the current urbanization and the spontaneous and disorderly modernization in rural areas to respond to the pressure of urban land demand. However, it is just pseudo-urbanization which only includes partial architectural characteristics of urbanization and no public facilities and services. This kind of pseudo-modernization and pseudo-urbanization of rural areas have caused irreparable damage to the traditional and cultural rural landscape. The development of architectural and landscape planning, development planning and rural cooperation networks that can cover the whole rural areas has become one of the measures to solve the current problems of rural development and construction.

5.2 The Planning and Construction of and the Resident Participation in Rural Development

The development of rural areas involves four main stakeholders: local government, construction companies and local planning departments, and farmers. In general terms, the rural development planning and construction framework should be a compromise between the four parties, but China's current system determines the pattern of rural development, planning and construction led by the government, assisted by public and private agencies and subordinated by residents based on state- and collective ownership of land. The pattern boasts the advantage of high efficiency but tends to cause short-sighted planning, lack of flexibility and planning and social problems such as the ignorance of farmers' interests. Therefore, from the perspective of protecting vulnerable rural residents, China's rural development should allow landless rural residents to participate in the formulation of rural development plans to ensure that they can share the incremental benefits of land and avoid high social and ecological costs of implementing rural development plans.

5.3 Urban-Rural Integration should include Rural Urbanization and Rural Modernization

China's adoption of the urban-rural development policy of »urban-rural integration« precisely reflects the reality of China's being an urban-rural dual society and facing huge regional differences. The integration of urban and rural areas means the coordinated development of urban and rural areas. On the one hand, rural areas provide surplus labor and land for urban areas to meet the needs of industrialization and urbanization expansion; on the other hand, urban areas invest in the industries, infrastructure facilities and public services to develop the backward rural areas. Therefore, in developed big cities, urban-rural integration mainly means the urbanization of rural areas, especially the suburbs near city centers, but there is an exception of some villages with historical and cultural traditions, which should be retained in the course of realizing modernization and sustainable development. In this way, the low-density land structure in suburban areas and the high-density land structure in city centers can be balanced so as to improve the quality of living environments, and the inheritance of the history and cultural traditions of these areas can be protected. In areas where there is too much pressure on land supply and demand or the existing single village cannot meet the requirements for protective planning and construction, the »folk village« can be constructed by extracting typical settlement patterns and architectural and cultural elements in the area to both meet the needs of urbanization and protect and develop local traditions and cultures so as to develop rural tourism to provide landless farmers with employment opportunities (Meng 2009, Meng et al. 2009).

In less-developed small and mid-size urbanized areas, the meaning of urban-rural integration is to modernize rural areas, supplemented by urbanization in rural areas, and focus on protecting villages with historical and cultural traditions to promote sustainable development in rural areas.

5.4 Development of Special Modern Agricultural and Non-Agricultural Industries

In addition to the support and nurturing policy of the government and the cities, the fundamental driving force for sustainable development in rural areas lies in their own industrial development. Due to the huge regional differences in China, it is a realistic and reasonable choice to implement different rural industrial development policies in different rural areas. In the coastal areas with developed economy and high level of urbanization, some rural areas with high environmental carrying capacity can develop high-tech modern agriculture, organic and ecological agriculture; and in some rural areas where there is beautiful ecological environment, long historical and cultural traditions and complete infrastructural facilities, they can develop rural tourism, rural real estate and leisure and entertainment on the basis of modern agriculture. In middle and western parts of China where there is less developed economy and low level of urbanization, some rural areas with high environmental carrying capacity can develop mid-tech modern agriculture and ecological agriculture; in some rural areas where there is beautiful ecological environment, long historical and cultural traditions and complete infrastructural facilities, they can develop rural tourism, rural real estate and leisure and entertainment on the basis of modern agriculture; and in other rural areas where the ecological environment is fragile, they can implement the policy of returning cropland to forest and grassland, such as constructing natural and ecological parks and developing ecological tourism.

5.5 Principle of Traditional and Cultural Protection in Rural Renewal Planning

The renewal and reconstruction of traditional villages with protecting value should include the external environment (landscape and transportation) and internal structure (functional zoning and architecture) of rural settlements (Wang 1999, Chang 2006). The external environment of rural settlements should include boundary conditions such as location, population, infrastructure, landmarks and external road transportation. Among them, landmarks are also called the first impression place, which is used as a village symbol and collective memory. It is a fusion of the rural cultural tradition and the surrounding natural scenery and also the primary

factor in attracting visitors. The principle of transportation priority helps the wide and straight road improve the traffic rate, but it would hurt the organic characteristic of the original rural roads and the »narrow points of memory« of the villagers. In contrast, naturally curved rural roads can diversify the rhyme of the rural landscape and increase the likelihood of passing vehicles staying. In order to reasonably use the land and efficiently manage the villages, the interior of rural settlement should be divided into central services, residential, industrial and ecological functional areas by function. In addition, the internal texture of rural areas should be preserved and improved, typical architectural style and elements be refined and rural landmark buildings be selected and maintained to create a rural style that combines tradition and modernity.

6 Conclusion

In the past Chinese regional policy was focused mainly on the development of urban areas, but with the fast growing of the megacities the interest now has turned its attention to a balanced and integrative urban-rural development with focus on small and middle size cities. The German rural development process could be an example for China how to develop regional-based and local adjusted solutions in different natural and cultural regions. After a fast urbanization promoted by »Land Finance Policy« of local government and based on the land public and collective ownership system, Chinese rural areas is slowing down the urbanization speed, and transforming the expansion and extensive urbanization into the smart and sustainable urbanization; more and more attention will be paid to the agricultural, land and cultural values in rural areas, and the interests of farmers will be more protected and reflected. Today, more and more people in China believe that the quality and sustainability of urbanization in rural areas is more important than the speed. In the future, China's rural areas will not only guarantee agricultural production, but also develop into rural industry, rural tourism, livable residential areas, and become the ecological and cultural scene. In this sense, German rural development experience can provide useful experience, although the German land system is different from that of China.

Note

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