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COVER TOPIC

Shaping agricultural and rural transformation





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About the DCZ

The Sino-German Agricultural Centre (DCZ) is a joint initiative of the German Federal Ministry of Food and Agriculture (BMEL) and the Ministry of Agriculture and Rural Affairs (MARA) of the People's Republic of China.

The DCZ was established in March 2015 as a central contact and information platform in charge of coordinating the bilateral cooperation between Germany and China in the agriculture and food sector. In April 2022, the project entered its third phase.

China is one of the world's largest food producers and consumers. Therefore, its agricultural development and transformation process is of significant importance for its German partners. By bringing together stakeholders from politics, business, and academia, the DCZ promotes the exchange of experience and knowledge to tackle shared challenges and support the sustainable development of the agriculture and food sector in both countries.

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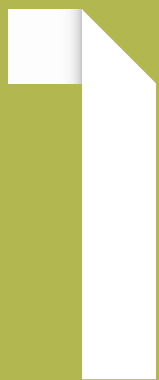
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Editorial



Dear partners and friends of the Sino-German Agricultural Centre,

Rapid structural change is transforming rural areas across Germany and China. This process leads to shifts in the size of farms, changes agricultural practices and land use patterns, accelerates the mobility of people, and introduces new interactions between agriculture and other sectors of the economy. It yields enormous potential for more prosperous and attractive rural areas, but also risks deepening inequalities between large and small farms as well as between cities and the countryside.

This issue of Harvest · 丰收 seeks to provide insights into the structural transformations that are reshaping farming landscapes in both Germany and China. Despite vast differences in current farm structures, farm sizes have been growing as farmers in both countries are facing pressures to produce food in an efficient and economically viable manner.

What policy options and practical approaches exist to help rural regions shape the transformation towards a farm sector that can achieve sustainable, inclusive, efficient, and resilient agricultural production? A comprehensive overview article and four case studies from both countries highlight the manifold approaches rural regions are taking to adapt to the structural changes that are reshaping their farms and communities – from strengthening rural value chains to growing high-value crops, employing resource-efficient technologies, and creating off-farm employment.

We wish you an inspiring read and look forward to your feedback and suggestions at info-dcz@iakleipzig.de.



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Lead article



Drivers and consequences of farm structural change in Germany and China

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Agricultural systems in Germany and China have been undergoing rapid structural change, shifting from small and family farms towards larger and more industrialized farms. This shift has major impacts on agricultural productivity, supply chain organization, rural communities, and the environment. Thus, farm structural change has received increasing attention from policymakers, farmers, agribusiness, and the general public.

Changing farming landscapes in Germany and China

GERMANY

Germany has a mixture of large and small farms. The average farm size in Germany is 61 ha as of 2020, varying significantly between eastern and western regions due to historical, economic, and social reasons. Farms in western Germany are much smaller than in the east. In eastern Germany, the average farm size grew from 82 ha in 2001 to 223 ha in 2019, while in western Germany, it increased from 28 ha in 2001 to 46 ha by 2019 (Kirschke et al., 2021).

The number of farms in Germany has been decreasing steadily. In 2023, there existed approx. 255,000 agricultural businesses, compared to nearly 299,000 in 2010 and around 797,000 in 1980. About ten German farms, mainly small and medium farms, went bust each day in the past decade, especially in the pig sector, where half of the pig farms closed down (Dahm, 2023). This drastic change has sparked intense discussions and worries among policymakers and citizens.

CHINA

The average farm size in China is notably small, around 0.6 ha – only 1% of Germany's average size. The small and fragmented farms in China are a result of the Household Responsibility System implemented in the late 1970s, allocating land from collective farms to individual households. China's farm sizes vary spatially due to factors like climate, terrain, and population density, with larger farms in northern regions. China has 203 million small family farms, with nearly 98% of them under 2 ha.

Farm sizes have been growing recently (Ji et al., 2016), due to land transfer and the emergence of new large-scale operators, “dragon-head” agribusinesses, cooperative farms, and professional family farms.

Similar to Germany, China has seen a reduction in farm numbers. China's farm count dropped by 13% from 247 million to 216 million between 2012 and 2017. The hog industry is transitioning from backyard and small-scale production towards corporate production. The number of large-scale farms, with at least 10,000 pigs, increased by 145% from 2007 to 2017 (Zhao et al., 2022). By 2023, 68% of pork production was from large-scale farms with 500 or more pigs.

Drivers of farm structural change

ECONOMIC FACTORS

Farms must enhance efficiency due to the growing demand for agricultural products. Efficiency is often higher in larger farms, which can capitalize on economies of scale. Small farms struggle to compete with larger ones, hindered by investment limitations and market access issues. Consequently, small farms are gradually pushed out by large and more efficient farms.

This is particularly true for Germany. Although family farms still largely dominate the German agricultural system, particularly in western Germany, they constantly face “grow or die” pressures. The economic uncertainty for small farms has worsened due to recent shocks: the threat of African Swine Fever for the hog industry, supply chain disruptions from Covid-19, and rising input costs from the Russia-Ukraine war. The rapid rise of land prices also contributes to farm structural change. Average prices for farmland in 2018 were 2.3 times as high as in 2009. This disadvantages small family farms compared to large farms due to financial disparities. Limited growth opportunities and uncertain economic prospects are the major drivers of this structural change.

In China, most farms are too small to be economically viable. They struggle to generate decent profit and income, as the rural-urban income gap continues to rise. This is one key concern highlighted in the No. 1 Documents released at the beginning of each year by the Chinese government. Planting cash crops like fruits and vegetables could help some small farmers economically (Rogers et al., 2021). However, for most farms to achieve economic profitability and sustainability, transitioning to moderate or large-scale production may be the most promising pathway.

AGRICULTURAL POLICY AND SUBSIDIES

Agricultural policies can also shape farm structural change by favoring certain types of farms. While the German government is using measures to slow down farm structural change by supporting small and family farms, China mainly advocates upscaling the smallholder farming system.

In Germany, the Common Agricultural Policy (CAP) of the European Union historically favored larger farms through direct payments based on the agricultural land area. Nearly a quarter of CAP funds were received by the top 1% of the largest farms, while the small and medium farms, which constitute 50% of all farms, collectively received only 8% of these subsidies (Dahm, 2023). Recently, the CAP has been refocused on environmental sustainability and support for small and medium-sized farms. A redistribution premium introduced in 2014 supports smaller farms by granting an extra payment per hectare for the first hectare below a certain threshold (“first-hectare payments”). Furthermore, organic farming, greatly supported by the government, helps small and medium farms by reducing costs from inputs while capitalizing on the increasing demand for organic food. This makes the farms economically viable despite their small size.

In contrast, China actively promotes upscaling agricultural production through various policy measures, including land consolidation programs and subsidies for larger farms. The government encourages the development of new agricultural operators like professional family farms, cooperatives, and agribusinesses. The moderate-scale family farms are particularly supported through a series of policies and governmental documents, including “Guideline on Promoting the Development of Family Farms” in 2014, “Opinions on Promoting the Organic Connection of Small Farmers and Modern Agriculture Development” in 2019, as well as the “High-Quality Development Plan for New Types of Agricultural Entities and Service Entities (2020-2022)” in 2020. As of 2023, the number of registered family farms reached 4 million, among which 1.77 million are crop farmers.

To stimulate the land market and land transfer, the Chinese government has made a concerted push with a slew of policies, notably “Opinions on Guiding the Orderly Transfer of Rural Land Management Rights to Develop Adaptive Scale Agricultural Management” in 2014, and “Opinions on Improving the Measures for the Separation of Rural Land Ownership and Contracting Rights and Management Rights” in 2016, which outlines the separation of three-rights (ownership right, contractual right, and operation right). Farmers can then transfer the operation rights to other farmers without losing the land contractual rights. By 2016, the area of land transfer reached 30.82 million ha – more than one-third of total contracted farmland.

TECHNOLOGICAL ADVANCEMENTS AND INNOVATION

Technological advancements and innovation (mechanization, automation, precision farming, and digitalization) favor the growth of large farms as they have better access to financial capital and their large size is better suited for utilizing these technologies. This can lead to the consolidation

of farms as larger ones benefit from technology and push out smaller, less efficient ones. This partially explained the structural change in Germany.

In China, on the other hand, the aspiration of agricultural modernization through the utilization of machinery and digital tools motivates the upscaling of farming operations. Technological advancements act as a pull factor in China, compared to the push factor in Germany. Machinery services and farm cooperatives are institutional innovations that allow small farms, to a certain degree, to benefit from technological advancements and realize economies of scale without necessarily growing in size (Qiu et al., 2021). In the long run, however, farms need to grow to a moderate scale to enjoy the benefits of digitalization technologies and other innovations fully.

DEMOGRAPHIC SHIFTS

The demographic changes, including the aging of agricultural labor, lack of qualified and willing farm workers, and uncertainty of succession of farms, create a labor shortage and succession problem in agriculture. Younger generations are often less interested in pursuing a career in agriculture due to lower income, long working hours, physically demanding work, and a less attractive rural lifestyle. This makes it particularly challenging for small and family farms to operate effectively and sustainably in both China and Germany.

Germany faces the “young farmers problem”, with fewer young people willing to engage in agriculture (Pitson et al., 2020). A “Young Farmer Payment” scheme has been implemented in the CAP to support young farmers. Still, most family farms face a generational renewal problem. Family farms without successors may have to exit.

In China, rapid urbanization via massive rural-urban migration has released the labor surplus and contributed greatly to economic development. At the same time, women and the elderly have become the main working force in agriculture. With few young people wanting to work in agriculture, China already faces the question of who will cultivate the farmland in the future. This demographic shift has facilitated land transfer and consolidation and will play a much larger role in the future.

Consequences and implications of farm structural change

- **Farm production and economic implications:** Farm size is closely associated with profitability, productivity, and efficiency. An increase in farm size has a positive effect on the net earnings of farmers, as well as the economic, technical, and labor efficiency in developed countries like Germany. Larger, mechanized agricultural establishments generally attain superior yields and are typically more effective. The efficiency of labor is notably greater for larger farms. In Germany, only 1.24% of the overall workforce is engaged in agriculture. In China, the correlation between land productivity and farm size is more complex and varies.

Weakly reversed correlations, inverted U-shaped correlations, and positive correlations have been documented in existing studies (Sheng et al., 2019). Still, we can expect that when farm size grows over a certain threshold, the productivity and technical efficiencies will also increase. Considering that ensuring food security is of utmost importance for China, the scaling up of farm sizes yields a beneficial impact on agricultural output.

- **Social impacts:** Changes in farm structure impact rural communities significantly. Small family farms are vital for cultural and social aspects such as job creation. The decline in these farms leads to the loss of traditional practices and a decrease in rural population. Limited opportunities in agriculture drive residents to move to cities in both Germany and China. This migration worsens the deterioration of rural infrastructure like schools and healthcare facilities. Germany, particularly eastern Germany, and China are both facing the challenge of revitalizing these rural areas.
- **Environmental effects:** Structural change can bring positive and negative environmental effects. In Germany, large and non-family farms in Germany are often viewed negatively and blamed for soil degradation, environmental pollution, and biodiversity loss due to their conventional and intensive farming practices with excessive agrichemicals inputs and monocultural crop plantations. However, recent research indicates that small family farms in Germany may not always be environmentally sustainable (Wuepper et al., 2020).

In China, the primary environmental issue is the excessive consumption of agrochemicals. China feeds 20% of the world's population with only 9% of agricultural land, but also consumes 30% of global fertilizers and pesticides (Wu et al., 2018). China's fertilizer use per ha is almost three times that of Germany. Overuse of agrochemicals is related to farm size. Larger farms tend to apply less fertilizer and pesticides per land area (Ren et al., 2019). Therefore, farm structure change has a largely positive environmental effect in China.

Conclusion and outlook

The ongoing farm structural changes in Germany and China present both challenges and opportunities. Understanding the drivers and consequences of this complex process is crucial for designing policies to shape the transformation and achieve sustainable, inclusive, efficient, and resilient agricultural production.

Both nations face similar pressures to produce food in an efficient and environmentally friendly manner. Despite the vast differences in the current farm structure, land tenure system, and development stage, China can still learn from Germany. Balanced policies that prioritize both productivity and environmental sustainability, young farm support programs, and organic farming are areas that may hold important lessons for China.

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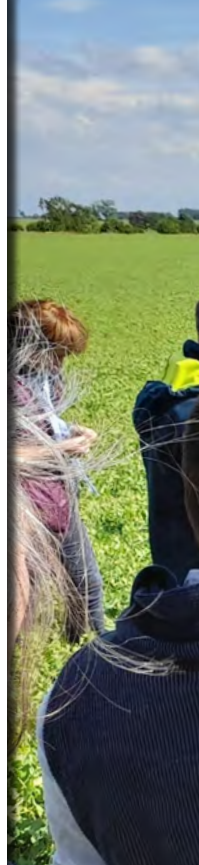
Case study 1

Project indicators

Location:	Federal State of Saxony, Germany
Year:	since 2021
Involved stakeholders:	approx. 100 farms and food companies
Supporting institution:	Saxon State Ministry for Energy, Climate Protection, Environment, and Agriculture
Funding:	EUR 4.9 million

PROVINCE

VALUE CHAINS



AgiL – Saxon Agency for Regional Food: Supporting regional producers along the value chain

Ina Volkhardt
AgiL

The AgiL – Saxon Agency for Regional Food was launched in December 2021 to strengthen regional value chains. It provides advice and networking services to local farms and food companies seeking to sell their products locally.

EXAMPLE 1: BUILDING REGIONAL VALUE CHAINS IN MEAT PRODUCTION

The German federal state of Saxony lacks slaughtering and meat processing capacities. After the reunification of Germany in 1990, livestock farming in Saxony, especially pig farming, fell dramatically, which led to a decline in the number of slaughterhouses and processing plants. As the remaining abattoirs are working at full capacity, a large proportion of Saxony's pigs are transported to neighboring federal states for slaughter. At the same time, consumer demand for meat products from the region is increasing. With the help of AgiL, several butchers from the Leipzig area have founded a joint abattoir that will source its meat from a

regional network of Saxon farmers. The abattoir is currently experimenting with various public financing models. Mobile slaughter units are another approach. In Central Saxony, AgiL is supporting the establishment of a farmer's cooperative that produces beef from pasture farming. A mobile slaughter unit enables the members of the cooperative to process the meat on-site and replace the long transport routes for live animals with slaughtering on the farm by animal welfare standards. AgiL also promotes labeling initiatives that help to highlight regionally produced food on supermarket shelves.



Picture: Stakeholders participate in an organic farm visit organized by AgiL – Source: AgiL

EXAMPLE 2: WORKING TOGETHER WITH FOOD RETAILERS

Availability and visibility are key to making regional food chains work. AgiL enables regional producers to connect directly to larger food retailers. Conducting a stakeholder survey, AgiL identified food logistics challenges, mapped the individual stores of large retailers accepting local produce, and informed farmers about certification requirements. AgiL also hosts events where large food retailers present themselves and assist local farmers and food companies to meet their requirements.

EXAMPLE 3: DESIGNING A DIGITAL PLATFORM FOR THE FOOD TRADE

E-markets can improve the visibility and accessibility of regional products. However, there are no established platforms in Saxony that help local producers to connect directly with retailers and restaurants. AgiL conducted a stakeholder workshop to identify the required functions of such a platform. Using a living lab approach, AgiL will continue to work with all stakeholders involved to develop a prototype of an electronic marketplace and disseminate it throughout Saxony.

EXAMPLE 4: ENABLING YOUNG ENTREPRENEURS

Economic constraints can make it difficult to incorporate regional products into existing value chains. In contrast, the implementation of regional products in new value chains is much more feasible. Young entrepreneurs are the key to building new value chains and are supported by AgiL as catalysts driving innovation. In regular workshops and training courses, food entrepreneurs learn how to develop a regionalization strategy, e.g., by using regional labels and connecting to AgiL's Saxony-wide network of food producers, processors, and retailers.

CONCLUSION: SMALL PIECES TO COMPLETE THE PUZZLE

There are many promising ideas for strengthening regional value chains, but food companies often lack the time and people to put them into practice. A third party like AgiL in Saxony can help to close the gaps in the value chain by bringing all pieces of the puzzle together.

4

Case study 2

Project indicators

Location:	Franconia-Hohenlohe, Southern Germany
Year:	since 2023
Involved stakeholders:	approx. 12 trial and demonstration farms as well as 20 associated food businesses along the value chain
Supporting institution:	German Federal Ministry of Food and Agriculture (BMEL)
Funding:	EUR 2.2 million



regiopakt: Promoting the cultivation of niche crops for local value creation

Climate change, loss of biodiversity, and societal demands are putting pressure on German farmers, especially when it comes to meeting domestic protein requirements. Promoting the cultivation of legumes has great potential to address these challenges. *The Protein Crop Strategy* of the German Federal Ministry of Food and Agriculture (BMEL) supports this approach.

Funded by BMEL, the innovation and research project *regiopakt*, which stands for “Regional value chains of the future for plant-based foods with species and climate protection services through digital technologies”, addresses these challenges in the so-called “future region” of Franconia-Hohenlohe in Southern Germany (see Figure 1). The project is being jointly implemented by researchers from the Nürtingen-Geislingen University (HfWU) and the University of Applied Sciences Weihenstephan-Triesdorf (HSWT). Both universities boast a strong network of business partners from the agriculture and food sector.

The Franconia-Hohenlohe region is characterized by a diversified, small-scale farming structure. These farms are at a competitive disadvantage on the global market. On the flip side, diversified, small-scale farms usually provide a broader mix of ecosystem services. Digital technologies can help such farms capture value from the ecosystem services they provide and differentiate themselves on the market.

The climatic and soil conditions in Franconia-Hohenlohe enable the cultivation of niche crops such as chickpeas, lentils, quinoa, and amaranth and help to diversify the range of plant-based foods grown by German farmers. A more plant-based diet represents an important building block for a sustainable agriculture and food system and, at the same time, brings health benefits for consumers. In line with the BMEL’s *Protein Crop Strategy*, the project aims to increase plant-based protein supplies in the region and strengthen regional value chains.



Figure 1: The future region of Franconia-Hohenlohe lies at the intersection of the German federal states of Baden-Württemberg and Bavaria.

Markus Frank
Nürtingen-Geislingen
University (HfWU)

The changing climate conditions in Central Europe are leading to a change in cultivation patterns. As prolonged periods of drought are making it increasingly difficult to grow established crops, regiopakt is focusing on reviving traditional crops such as lentils. At the same time, the project is researching the sustainable cultivation of new, high-value crops such as chickpeas and amaranth.

As a rural region around the city of Würzburg, Franconia-Hohenlohe also offers enormous potential for the development of innovative plant-based value chains. As part of the project, digital value chain solutions are being developed and tested that connect agricultural producers with the consumer potential of a large city like Würzburg. There are several innovative companies and start-ups in the region with interesting business models and solutions that regiopakt would like to attract as partners.

Overall, regiopakt will explore digital solutions that contribute to higher value creation for local farmers by focusing on the following points:

1. Diversified agricultural systems and landscapes that promote biodiversity and are better adapted to climate change
2. Direct links between farmers and consumers that bypass retailers and allow farmers to obtain higher prices for the ecosystem services they provide
3. New types of crops that promote healthy and sustainable diets



Case study 3

Project indicators

Location:	Beijing Changping District
Operator:	Beijing Yinhuang Green Agricultural Ecological Park
Size:	13 ha
Year:	since 2021
Other stakeholders:	more than 300 neighboring farms
Supporting institution:	Bayer China

FARM

RESOURCE-EFFICIENT
TECHNOLOGY

Beijing Yinhuang – Bayer ForwardFarm: China's path to sustainable agriculture

Bayer ForwardFarming is a global initiative launched by Bayer in 2015. It aims to work with independent farms around the world to adopt advanced tools and methods that can improve planting efficiency, food quality, and safety as well as the ecological environment, taking into account a regenerative agricultural approach. At Bayer ForwardFarms, farmers and Bayer experts demonstrate innovative solutions for sustainable agriculture that comprise three components:

Care for crops: Promoting innovative products and solutions tailored to farmers' needs, including high-quality seeds and traits, biological and chemical crop protection products, and digitalization.

Care for the planet and people: Ensuring product integrity; protecting human safety and the environment through measures such as biodiversity promotion, water conservation, and farm wastewater management, as well as training on the safe use of pesticides.

Care for partnerships: Improving the livelihoods of farmers, communities, and society; promoting mutual benefit and win-win results for partners in the food value chain; maximizing cooperation opportunities in modern agriculture.

On 24 September 2021, Bayer announced its first ForwardFarming collaboration in the Asia-Pacific region with Beijing Yinhuang Green Agricultural Ecological Park as a partner farm.

Yinhuang Farm uses modern greenhouse technology to produce high-quality vegetables and fruits such as tomatoes, colored peppers, strawberries, leafy vegetables, and cucumbers. It covers an area of 13 ha on which it operates 70 solar greenhouses and two glass greenhouses. Ambitious, persistent, and with a deep love for the land, Aiteng Qin, farm manager at Yinhuang Farm, embodies the spirit of ForwardFarmers. "At Yinhuang Farm, we are very happy



Delivering Regenerative Ag Benefits and Driving Industry Development



Figure: Results achieved at 13 ha Bayer ForwardFarm Yinhuang, Beijing, 2021-22

Phoebe Chen,
Silvia Wang
Bayer China

and proud to be able to join Bayer's ForwardFarming initiative and actively participate in Sino-European agricultural exchanges that explore sustainable solutions", says Aiteng Qin. "Together with our partners, we will help foster the development of sustainable agriculture and advanced agricultural technologies in China by sharing the experiences of our demonstration trials with fellow farmers".

Sustainable agricultural operations at Yinhuang Farm include the following aspects:

1. **Seeds:** Yinhuang Farm demonstrates a variety of vegetable varieties that are of high quality and nutritional value, high yield, and in line with consumer tastes to increase farm income.
2. **Pest and disease control:** In cooperation with the Beijing Plant Protection Station, the farm explores comprehensive pest and disease management strategies that reduce the use of pesticides, increase efficiency, and are green and environmentally friendly to ensure food safety.
3. **Soil and water protection:** Yinhuang Farm has introduced Bayer's integrated safe pesticide service station, using the EasyFlow contactless closed dispensing system and the Phytobac pesticide cleaning wastewater treatment system to reduce the impact of plant protection products on the environment and farmers.
4. **Farm management:** Yinhuang Farm implements BayG.A.P. (Bayer Good Agricultural Practice Demonstration) to ensure food safety and protect the environment. BayG.A.P. covers thirteen aspects, including farm site management and record keeping, integrated pest management, irrigation systems, food safety, waste management, safe use, pesticide application technology, traceability, integrated crop solutions, pollinators, seeds, biosecurity TR4, and regenerative agriculture.
5. **Flowering strips:** Yinhuang Farm plants flowering crops replacing unfavorable vegetation, providing a food source for bees and other insects. At the same time, the Chinese herbal medicine grown on the farm can achieve economic benefits, creating a balance between ecological protection and farmers' interests.



Case study 4

Project indicators

Location:	Nanzhanglou Village, Heguan Town, Qingzhou City, Weifang City, Shandong Province, China
Population:	4,370
Annual per capita income:	RMB 32,000
Food companies:	2 (plant nursery, vegetable processing factory)
Cooperatives:	2 (livestock cooperative, rural tourism cooperative)
Other enterprises:	9 (power production, plastics processing and machinery factory, fertilizer production, garment and textiles, flour mill, tissue paper processing)
Institutions:	Bavarian Ministry of Food, Agriculture and Forestry, Hanns Seidel Foundation, Chinese Ministry of Natural Resources
Year:	since 1988

OFF-FARM EMPLOYMENT

VILLAGE

FARMLAND
DISTRIBUTION

Data provided by Nanzhanglou Village (March 2024)

Sino-German land consolidation and village renewal project in Nanzhanglou

The Nanzhanglou Land Consolidation and Village Renewal Project was launched in 1988. Within the framework of Shandong-Bavaria sister province relations and with the support of the Bavarian Ministry of Food, Agriculture and Forestry, the Hanns Seidel Foundation, and the Chinese Ministry of Natural Resources (formerly Ministry of Land and Resources), the village of Nanzhanglou has been implementing the concept of “Equal Living Conditions between Urban and Rural Areas” for more than 30 years. The Sino-German project has significantly promoted the development of Nanzhanglou. Its implementation has improved the conditions for economic development and raised the living standards of the villagers.

The original plots in Nanzhanglou were fragmented and uneven, and each family’s farmland was scattered, making agricultural mechanization impossible and binding nearly all the village workforce. Following the signing of the cooperation agreement in 1988, the Nanzhanglou project completed the land consolidation and redistribution process in just four months in 1991. This was preceded by nearly two years of preparatory work, including on-site supervision by German experts, cadastral surveys, public participation, training

programs, and visits to Germany by Chinese personnel. As a result, Nanzhanglou became the first village in China to break up the boundaries of the village production teams that had farmed the land before China’s reform and opening. Supporting measures such as road construction and irrigation were also systematically implemented.

After land consolidation, the arable land in Nanzhanglou increased, and each family’s plot grew, creating the conditions for agricultural mechanization. The land consolidation projects significantly reduced the labor intensity of farming, allowing villagers more time for non-agricultural employment while securing their agricultural income. To enhance the vitality of village development, improve living conditions, and preserve traditional architecture and rural culture, the Hanns Seidel Foundation, in cooperation with the Chinese and Bavarian ministries, started the village renewal project in 1990. This project included the development of functional zoning of the village area and the construction of infrastructure such as schools, hospitals, villagers’ activity centers, and a village museum. With support from Germany, villagers participated in various vocational training programs, including animal husbandry and agricultural machinery maintenance.



Picture: Seedling production at the plant nursery in Nanzhanglou – Source: DCZ

Zhang Wenjun

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Foundation*

There are 11 enterprises in Nanzhanglou Village. The leading company, Weifang Leiteng Power Machinery, offers 150 jobs, a third of which are filled by young villagers from Nanzhanglou. Technical positions in the company can offer monthly salaries of up to RMB 15,000. In addition, enterprises such as vegetable processing plants and flour mills extend the agricultural industry chain through the deep processing of agricultural products, providing further employment opportunities. In addition, villagers are strengthening cohesion and development initiatives by forming cooperatives. For example, the Rural Tourism Cooperative organizes strawberry and dragon fruit planting and picking activities throughout the year, attracting visitors from neighboring cities for sightseeing tours and farm life experiences.

Thanks to the Sino-German cooperation project, the population of Nanzhanglou village is growing steadily. The villagers' income has continued to rise, reaching a per capita income of RMB 32,000 in 2023, higher than the national rural average of RMB 21,691 (National Bureau of Statistics, 2023). The ratio of villagers' agricultural income to non-agricultural income in Nanzhanglou is about 2:8.

The Hanns Seidel Foundation regularly sends experts to Nanzhanglou to supervise projects within the framework of Sino-German cooperation. In addition, the Foundation organizes various activities, such as summer schools for university students and international seminars in the village to provide new ideas for project development. At present, Nanzhanglou not only focuses on self-improvement but also leads regional development. In 2018, the Hanns Seidel Foundation signed a new cooperation agreement with the Qingzhou municipal government to establish an integrated Nanzhanglou regional project to address current and future challenges involving 17 neighboring villages.

In 2017, the Chinese government launched the "Rural Revitalization" strategy. Nanzhanglou was at the forefront: Over the past 30 years, it has put this concept into practice and has become an international model of rural development thanks to positive Sino-German cooperation. The project has attracted the attention of experts, scholars, and the media at home and abroad.

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News from
the DCZ



Setting the direction for Sino-German agricultural cooperation

Strengthening the bilateral dialogue on the transformation of agrifood systems will remain the focus of our work in 2024. At the annual meeting of our project steering committee in January at the German Federal Ministry of Food and Agriculture (BMEL) in Berlin, representatives of the German and Chinese ministries of agriculture emphasized the importance of this topic, as both countries are working to ensure food security while protecting our most important common goods: soil, water, and biodiversity. With a joint action plan (2024 to 2028) signed by both ministries during the Global Forum for Food and Agriculture (GFFA) in Berlin earlier this year, increased cooperation on issues such as rural development, climate change, and the protection of natural resources is expected.

Promoting exchange on agrobiodiversity

Last year, we announced a new project on “Sustainable use and management of agrobiodiversity as a contribution to transformation to climate change resilient food systems and innovative development in rural regions”. The project, which is funded by the Innovation and Transformation Dialogue (ITD) of Germany’s Federal Ministry of Food and Agriculture (BMEL), addresses the impending loss of cultivated plant varieties in China and Germany. The goal is to strengthen bilateral exchange on the conservation and recultivation of old varieties and explore their potential to make food systems more climate-resilient while offering new economic opportunities for rural regions. The kick-off workshop in December 2023 marked the official launch of the project, bringing together experts from organizations such as Farmers’ Seed Network, VERN e.V., the Chinese Academy of Agricultural Sciences, the Alliance of Bioversity International, the Foundation on Future Farming & Save Our Seeds, Xishuangbanna Tropical Botanical Garden, nova-Institut, the Information and Coordination Centre for Biological Diversity at the German Federal Office for Agriculture and Food, Food-think, Eberswalde University for Sustainable Development, Wuhan University, and China Agricultural University. Two study tours are planned for 2024, during which our experts will visit local initiatives that are pioneers in biodiversity conservation in agriculture in both countries. As a result of the project, a publicly accessible toolbox will be created containing best practices and policy recommendations.

Understanding agroecology in China and Germany



Agroecology is increasingly recognized in China’s agricultural development as a practice that can help address pressing environmental issues such as soil degradation, water pollution, and biodiversity loss. Although both China and the European Union are committed to organic agriculture, there are notable differences in their approaches and priorities. A new contribution to our series “Making sense of ...” by Qiao Yuhui from China Agricultural University sheds light on how the concept of agroecology is understood in the Chinese context and provides an overview of the policies China has implemented to promote agroecological practices in the agriculture sector.

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