

## Ex-post evaluation

# Sino-German Smallholder Forestry Development Program, China

|                                           |                                                                                                                    |                       |      |                              |      |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------|------|------------------------------|------|
| <b>Title</b>                              | Sino-German Smallholder Forestry Development Project (Original Title: "Desertification Control Henan")             |                       |      |                              |      |
| <b>Sector and CRS code</b>                | Afforestation 31220                                                                                                |                       |      |                              |      |
| <b>BMZ number</b>                         | 200365924                                                                                                          |                       |      |                              |      |
| <b>Commissioned by</b>                    | German Federal Ministry for Economic Cooperation and Development                                                   |                       |      |                              |      |
| <b>Recipient and executing agency</b>     | People's Republic of China represented by the Ministry of Finance (MoF) Henan Provincial Forestry Department (PFD) |                       |      |                              |      |
| <b>FC financing volume and instrument</b> | EUR 6,000,000 grant                                                                                                |                       |      |                              |      |
| <b>Project duration</b>                   | 2005-2015                                                                                                          | <b>Reporting year</b> | 2025 | <b>Year of random sample</b> | 2018 |

## Project objectives and implementation

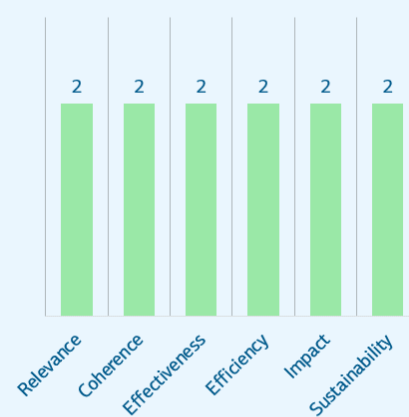
The objective at the outcome level was the sustainable land use management under consideration of the needs of the local population in selected counties in Henan Province. The overarching development objective was two-fold: first, to reduce the project area's soil erosion. Second, to improve the population's livelihood. The project established and rehabilitated commercial and protection forests, as well as introduced sustainable land use management.

## Key findings

The project was highly relevant and was able to achieve a good development impact, in particular with regard to sustainable land use management. The project has been rated "successful" for the following reasons:

- The project was well-designed to combat soil erosion in the project region. Even 10 years after the project's completion, the positive impact of the project measures on soil erosion control remains highly visible.
- The project implemented a participatory land-use planning approach that ensured strong local ownership and participation. The approach was innovative and was disseminated in the forestry sector across Henan province.
- The establishment of economic forests (fruit and nut trees) has become the main income source of farmers and has created additional local seasonal and permanent employment opportunities in the project areas.
- While the project aimed to achieve the dual goals of controlling soil erosion and reducing poverty among the local population, its primary focus on soil erosion meant that contributions to poverty reduction were limited.
- Long-term non-timber forest products continue to increasingly improve the livelihood of the local population as the forests develop. Main products include plants and herbs used for Chinese medicine, use of forest residue in mushroom farms, cicada farming, and beekeeping.

## Overall rating successful



1: very successful – 6: completely unsuccessful

## Conclusions

- To foster local ownership and sustainable project outcomes, participatory land-use planning forms a key foundation.
- Capacity-building measures for the Project Executing Agency and the local population are a key component to ensure project success even after the implementation phase.
- Multiple-cycle monitoring throughout project implementation, and associated partial payments, can help increase implementation quality compared to one-time monitoring at the end of a project

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## List of abbreviations

|      |                                                           |
|------|-----------------------------------------------------------|
| BMZ  | Federal Ministry for Economic Cooperation and Development |
| CPO  | County Project Office                                     |
| DAC  | Development Assistance Committee                          |
| DFG  | German Research Foundation                                |
| EIB  | European Investment Bank                                  |
| EPE  | Ex-post evaluation                                        |
| EUR  | Euro                                                      |
| FC   | Financial cooperation                                     |
| FC E | FC Evaluation                                             |
| GDP  | Gross domestic product                                    |
| NTFP | Non-Timber Forest Products                                |
| OECD | Organisation for Economic Co-operation and Development    |
| PA   | Project appraisal                                         |
| PCR  | Project completion report                                 |
| PEA  | Project Executing Agent                                   |
| PLUP | Participatory Land Use Planning                           |
| PPO  | Provincial Project Office                                 |
| RMB  | Renminbi, Chinese currency                                |
| SDGs | Sustainable Development Goals                             |
| TC   | Technical cooperation                                     |
| TCM  | Traditional Chinese Medicine                              |
| ToC  | Theory of Change                                          |
| USD  | US Dollar                                                 |

# Overview

## General conditions and classification of the project

Since the late 1990s and early 2000s, China has implemented large-scale reforestation and afforestation programs to combat deforestation, soil erosion, and desertification – both with national afforestation programs and international support. China's forest cover has steadily increased since 2000, with estimates showing a rise from about 17–18% forest cover in 2000 to over 22% by the early 2020s. Forests in China play a critical role in carbon sequestration, biodiversity conservation, and watershed protection. The Chinese government has increasingly emphasized the ecological functions of forests alongside economic uses. China's forestry policies have evolved to integrate sustainable forest management, ecological restoration, and community involvement. The government has strengthened legal frameworks and enforcement mechanisms to protect forests.

A significant wealth gap exists between urban and rural areas in China. Marginal agricultural regions, in particular, have small share in the economic growth of the booming urban regions. In this context, China and Germany initiated the “Sino-German Smallholder Forestry Development Project” in 2005, located in the mountainous Funiu region in the south-west of Henan Province. The project was designed as an open program approach, in which target goals for afforestation measures and other project activities were adapted to the local conditions and demand.

## Brief description

The project “Sino-German Smallholder Forestry Development Project”, implemented between 2005 and 2015, aimed at improving, rehabilitating and conserving the ecological environment in the four project counties in Henan Province, People's Republic of China, and to reducing the poverty situation. Specifically, the project was aimed to improve land use systems and vegetation cover on degraded lands and thus contribute to reducing water run-off and soil erosion. The selection of concrete areas included in the project was to follow as close as feasible a systematic watershed management approach, implementing soil erosion control measures such as the construction of check dams and terraces in important watershed areas.

Around 30,000 ha of protected and commercial forests were newly established or rehabilitated and sustainable forest management was demonstrated on around 800 ha. Together with other erosion control measures and the promotion of livestock farming, “Integrated Watershed Management” was demonstrated in each of the four project districts. These measures were aimed at reducing soil erosion in important water catchment areas and thus contribute to improving the environmental conditions in the region.

Farmers, according to land available and choice were able to participate in 6 different afforestation categories: (1) productive protection forest, (2) timber forest, (3) economic forest for intensive management of species having high potential value near market centres where the use of grafted tree stocks was promoted, (4) economic forest with mixed production and soil conservation functions (5) forest closure, and (6) forest closure with enrichment planting. Besides, the project had components related to soil and water conservation, animal husbandry to compensate livestock farmers for loss of grazing area where applicable, and sustainable forest management.

## Breakdown of total costs

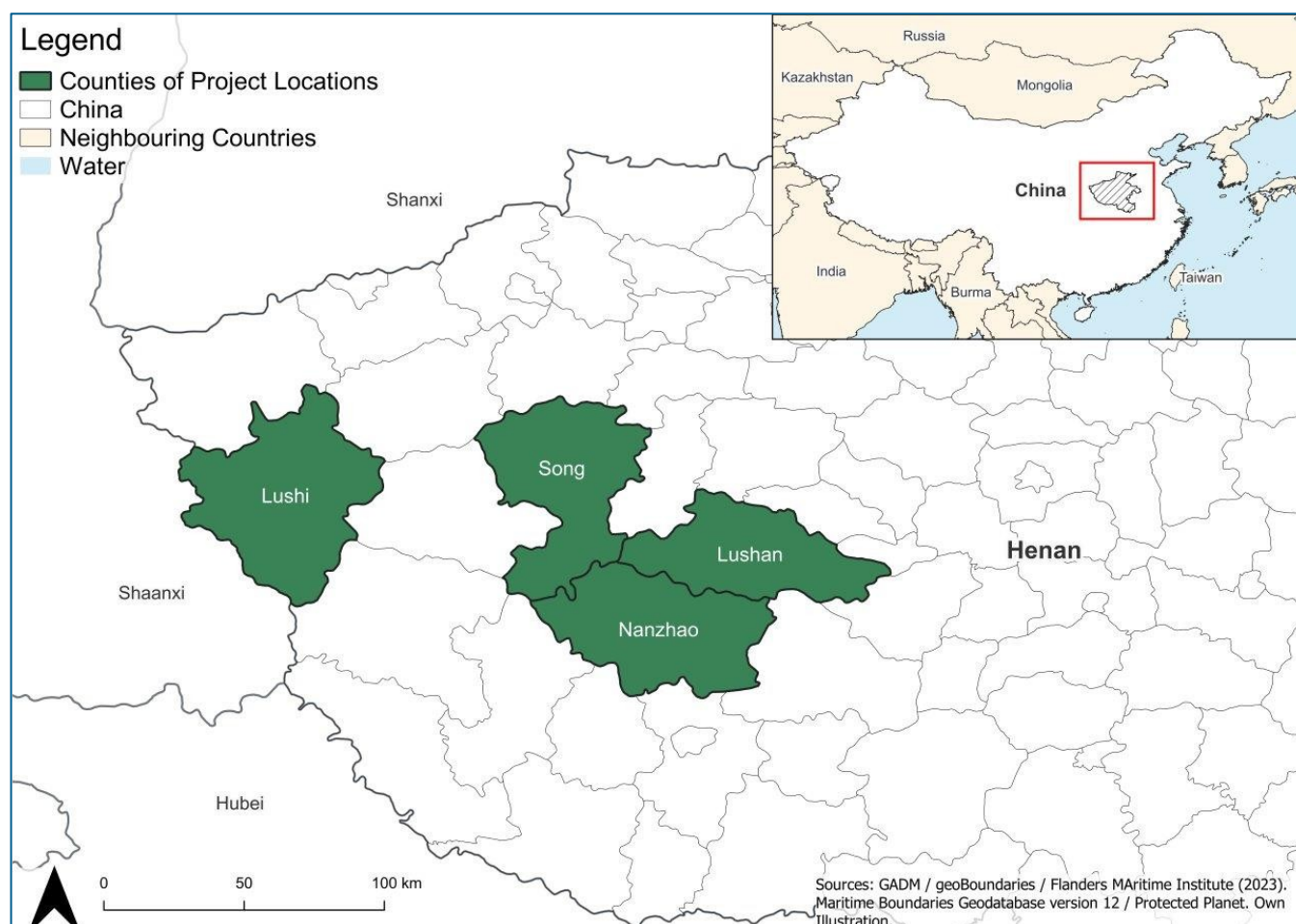
Of the total costs of around EUR 10.9 million, EUR 6 million were financed from German Financial Cooperation (FC) funds.

|                                                   | Phase 1 (plan) | Phase 1 (actual) |
|---------------------------------------------------|----------------|------------------|
| <b>Investment costs (total)</b><br>in EUR million | 10.2           | 10.9             |
| <b>Own contribution</b><br>in EUR million         | 4.2            | 4.9              |
| <b>External funding</b><br>in EUR million         | 6.0            | 6.0              |
| <b>of which BMZ funds</b><br>in EUR million       | 6.0            | 6.0              |

**Table1:** Breakdown of costs.

**Source:** Own data.

## Map of the project region



**Figure 1:** Map of the Project Region.  
**Source:** Own illustration.

## Project-specific strengths and weaknesses of the project

### The strengths include in particular:

- Sustainable land use management was effectively implemented, particularly through the *participatory land-use planning* (PLUP) approach, which ensured ownership and good participation of beneficiaries.
- Most afforested areas were categorized as public welfare forests after project completion, which ensures long-term funding for maintenance measures.
- The project approach was considered innovative and highly relevant at the time, which contributed to its successful dissemination and adaptation in similar forestry projects.

### The weaknesses include in particular:

- There was only a limited long-term impact on poverty reduction for some of the targeted beneficiaries, as afforestation measures mainly served protection purposes and were less effective in improving livelihoods in mountainous rural areas.
- Insufficient financial incentives (subsidies or attractive market prices) led to decreased motivation of local farmers to continue with maintenance activities for some forest categories.

## General conclusions/lessons learned

- Participatory land-use planning should be implemented as a basis for project implementation in order to create ownership among farmers and enhance their abilities to sustainably maintain project results.
- Capacity building measures for Project Executing Agency and local farmers are a key component to ensure project success even after the implementation phase.
- Projects that incorporate remuneration for beneficiaries to participate in project activities, such as subsidies for the participation of farmers in forest management activities, should take into account potential changes in income levels over time and reserve budgets accordingly. Especially in fast-paced environments of emerging economies, flexibility in terms of remuneration is important to maintain an appropriate level of compensation.
- Multiple-cycle monitoring throughout project implementation and associated partial payments can help to increase implementation quality as compared to one-time monitoring at the end of a project.

# Assessment according to OECD DAC criteria

## Relevance

### 1. Alignment with policies and priorities

At the time of project preparation and implementation, the project objectives were fully aligned with the Chinese government priorities to improve vegetation rehabilitation, ecological restoration, afforestation as well as soil and water conservation. It was aligned with the following relevant policy documents and programs: “Decision on Accelerating Forestry Development” (2003), “11th Five Year Plan” (2006–2010), “Three North Shelterbelt Program”, “Yangze River Shelterbelt Program”, and “Henan Forestry Ecological Province Construction Plan”.

At the time of the evaluation the objectives of forestry development and soil erosion control remained a priority of the Chinese government (key policy documents include: “National Land Greening Plan Outline (2021–2030)”, “Guiding Opinions on Scientific Land Greening” (2021), “National Soil and Water Conservation Plan (2015–2030)”, “Plan for the Enhancement Project of Forestry Ecological Province Construction in Henan (2013–2017)”, “Plan for Forest Henan Ecological Construction (2018–2027)”). At the same time, the project goal to reduce poverty in rural areas was also in line with the priorities of the Chinese Government (key policy documents include: “China Rural Poverty Alleviation and Development Outline (2001–2010)”, “Three Rural Issues”, “13th Five-Year Rolling Plan and Annual Program for Poverty Alleviation in Henan Province”).

The objectives were and are in line with global priorities (e.g., “United Nations Convention to Combat Desertification”, “Water Conservation Agenda 2021”, “United Nations Forum on Forests”) and the German government (BMZ Core Area “Schutz unserer natürlichen Lebensgrundlagen”). In particular, through the focus on forestry development, the project aimed to support the Chinese government in its action plans and reform processes in the forestry sector in global climate protection and adaptation, mitigation of greenhouse gas emissions, as well as the preservation of biodiversity and natural resources. The purely grant-based financial cooperation between Germany and China in the 1990s and 2000s served as the basis for subsequent loan-financed FC projects in the sector.

### 2. Alignment with the needs and capacities of stakeholders and beneficiaries

The project aimed at tackling two core problems in the target area: First, it was to support forestry development to combat soil erosion. At the same time, the measures were aimed at improving the livelihood of the rural population by reducing poverty as well as the risk of natural hazards such as floods. The identification of the core problem and corresponding goals was adequate both at the time of appraisal and from today's perspective.

The project concept was highly aligned with the interests of beneficiaries and local authorities. The selected counties were categorized as poverty counties according to national standards (the average per capita income in the four project districts was between EUR 140 and EUR 160 per year). At the time of project design, there were large differences in income between urban and rural areas. As the project areas were selected exclusively in rural areas, the income of the local population was even below the average income in the districts. The selected project areas particularly included villages in rural regions in counties that fell below the poverty line according to national standards and were thus highly relevant with regard to tackling the identified core problem.

A key component for a meaningful intervention for the beneficiaries was the project's participatory approach (*PLUP*), which was designed to empower local farmers (incl. women) in participatory decision-making via bottom-up approach. Additionally, the project concept supported decentralized management by province-level government units, county-level government units as well as the support of an international implementation consultant. The objectives were also consistent with the beneficiaries' requirements, as the project targeted poor communities with the goal to improve their livelihood through soil erosion control measures.

### 3. Appropriateness of design

The project was implemented by the Henan Provincial Forestry Department, in which a provincial project office (PPO) was established that was responsible for coordinating project activities with the four county forestry bureaus and the implementation consultant. In the course of project implementation, the capacities of the PPO and county project offices were supposed to be strengthened via targeted trainings to enable them to manage and implement the project activities (output).

To address the two core problems of soil erosion and poverty in the project area, the project was designed in a holistic approach, targeting ecological goals (resource conservation), social goals (participatory approach considering local needs), as well as economic goals (poverty reduction and improvement of livelihood). This was appropriate in order to tackle the two-fold goals of soil erosion control and livelihood improvement.

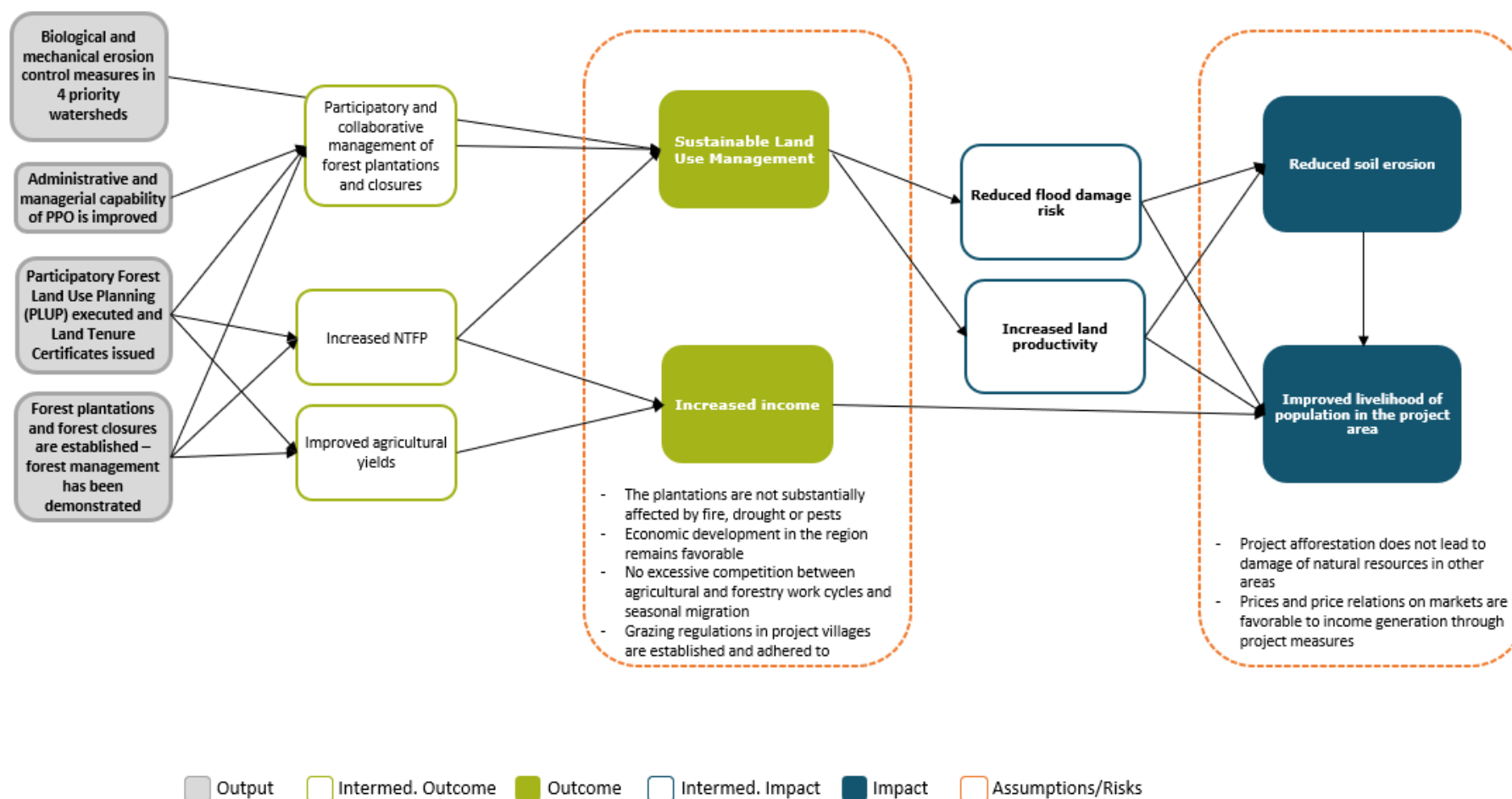
By implementing PLUP activities with the engagement of the local population, and subsequently establishing forest plantations, forest closures and implementing forest management activities (outputs), the project established participatory and collaborative forest management practices. Additionally, biological and mechanical soil erosion control measures should be implemented in priority catchment areas (outputs). This was intended to contribute to a sustainable land use management (outcome), which reduces the risk of flood damage, increases land productivity and thus reduces soil erosion in the project area (impact). At the same time, through the establishment of forests, forest management and forest closures (output), the agricultural yields should increase, and the population should be increasingly able to use and generate income out of non-timber forest products (NTFP), such as mushrooms. Together with labor subsidies that should be paid to the local population for the participation in the project, these measures should increase the income of the population in the project area, which was predominantly poor (outcome). Eventually, the livelihood of the local population should be improved (impact). The Theory of Change (ToC) of the project is illustrated in Figure 2.

#### 4. Adaptability – response to change

The project was highly adaptive to change due to its approach as an open program. For example, the operational plan was reviewed and adapted three times during the implementation period (2009, 2010, 2012) to reflect changes in the area targets of various afforestation categories and other project measures that matched local demands and conditions.

##### **Rating summary of relevance: successful (2)**

The project's relevance is rated as successful, reflecting a well-aligned, needs-based, appropriately designed, and adaptable concept that fits the political, institutional, and social context and effectively addresses the core problem.



**Figure 2:** Visualization of the project's theory of change.  
**Source:** Own illustration.

## Coherence

### 5. Internal coherence

The project was coherent with the Sino-German FC in the forestry sector, which started in 1993. The Sino-German FC was embedded into the two larger programs “Desertification and Soil Erosion Control North China” and “Sustainable Forest Management South China”, with the project being attributed to the North program. However, no evidence could be found of any coordination activities by the larger FC program regarding the project, which could have further strengthened internal cohesion.

The Sino-German Technical Cooperation (TC) was also active in the forestry sector. In addition to several measures in Southern and Western China, a total of three forestry projects were carried out in Northern China by the German TC. For example, the TC was involved in the further training of teachers in the forestry sector and also supported the development and implementation of participatory, ecologically oriented land use models and the introduction of a monitoring and management information system for the *Three Norths Shelter Forest Program*. In this context, TC supported the development of PLUP procedures that were used in the project. Continuous dialogue between the Financial and Technical cooperation ensured that synergies were harnessed whenever possible, for example by exchanging experiences in project implementation during donor coordination meetings that were organized by the National Forestry Bureau.

### 6. External coherence

The project was embedded into other donor-funded projects that were implemented during the same period by the Henan Forestry Agency, which ensured synergies and donor harmonization (e.g., “Japan Government Loan Henan Afforestation Project (2006–2012)”, “EIB Henan Sustainable Management of Rare and High - Quality Timber Forests Project (2016–2020)”). For example, the lessons learned from the project were incorporated in the European Investment Bank (EIB) project appraisal. The project was also embedded into other programs funded by the Chinese government at national as well as provincial level (e.g., “Grain for Green Project (2002–2020)”, “Afforestation under the Natural Forest Protection Project (2002–2012)”, “Henan Forestry and Ecological Province Construction (2008–2012)”, “Henan Forestry and Ecological Province Construction Enhancement Project Plan (2013–2017)”).

On a national level, the National Forestry Bureau organized regular conferences to exchange on the experiences of national, provincial, and international forestry projects, which strengthened the knowledge exchange between different initiatives.

#### Rating summary of coherence: **successful (2)**

The project was well embedded into other initiatives implemented by German Development Cooperation as well as international donor initiatives and is rated successful in terms of coherence.

## Effectiveness

### 7. Achievement of objectives

The updated project objective is defined as: “A sustainable land use management under consideration of the needs of the local population in selected counties in Henan Province is followed”.

The following indicators were used to measure the outcome objective:

| Indicator                                                                                   | Status at time of review | Target value at EPE (review)      | Actual value at PCR | Actual value at EPE                         |
|---------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|---------------------|---------------------------------------------|
| (1) Sustainably managed afforested area                                                     | 0                        | 11,188 ha (goal adjusted in 2012) | 8,451 ha            | 8,451 ha<br>Target value partially achieved |
| (2) Sustainably managed planted fruit and nut tree area ( <i>Economic forest I and II</i> ) | 0                        | 2,163 ha (goal adjusted in 2012)  | 1,852 ha            | 1,852 ha<br>Target value partially achieved |
| (3) Number of distributed land use rights                                                   | 0                        | No data available                 | 13,737 households   | 13,737 households<br>Target value achieved  |

|                                                                  |   |                                                    |                                                                                             |                                                                                             |
|------------------------------------------------------------------|---|----------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| (4) Average labor subsidies                                      | 0 | No data available                                  | 13,737 households received cash, material (free seed-lings) and/or guarding benefits        | 13,737 households received cash, material (free seed-lings) and/or guarding benefits        |
|                                                                  |   |                                                    | Labor subsidy: 1,786 RMB/household                                                          | Labor subsidy: 1,786 RMB/household                                                          |
|                                                                  |   |                                                    | Guarding subsidy: 51 RMB/household                                                          | Guarding subsidy: 51 RMB/household                                                          |
|                                                                  |   |                                                    |                                                                                             | Target value achieved                                                                       |
| (5) Number of people benefiting ( <i>new indicator for EPE</i> ) | 0 | The target level was not defined during appraisal. | Direct participants: approx. 45,000 (13,737 households in 463 villages across 38 townships) | Direct participants: approx. 45,000 (13,737 households in 463 villages across 38 townships) |
|                                                                  |   |                                                    | Indirect beneficiaries <sup>1</sup> : approx. 130,000                                       | Indirect beneficiaries: approx. 170,000 (increase mainly due to increase in eco-tourism)    |
|                                                                  |   |                                                    |                                                                                             | Target value achieved                                                                       |

**Table 2 :** Outcome target achievement.

**Source:** Final Report (2015), PEA data (2025)

The project was continuously monitored, and target levels of project indicators were adjusted based on the actual demands and conditions on-site. Overall, the objectives were mostly achieved. In total, the afforested and managed area of the project accounted for over 3% of the forest area in the four project counties.

## 8. Contribution to the achievement of objectives

There were several outputs of the project that contributed to the achievement of the outcome objectives. All implemented afforestation measures (establishment of productive protection forests, timber forests, economic forests, forest closures, forest closures with enrichment, and forest management thinning/tending) all positively contributed to soil erosion control and sustainable land use management. With regard to the improvement of the local population's livelihood, the different afforestation measures had different effects or economic benefits for the beneficiary population:

- **Productive protection forests** (approx. 6,400 ha – indicator 1): The sample plots visited during the evaluation showed a satisfactory tree growth and an improved stand structure. The outputs were also contributing to the achievement of economic benefits for the local population: The residues from the forest management, collected through the thinning of oak trees, are regularly sold to local mushroom farms where they are used for shiitake mushroom cultivation, which contributes to the income of the local population. In 2015, these activities generated an additional income of about 600 RMB per household, which increased to about 1,000 RMB per household in 2025.

Additionally, the local population now collects and sells tung oil seeds for additional income. Moreover, the thorns of Chinese honey locust (*Gleditsia sinensis*), weeping forsythia (*Forsythia suspensa*), and Japanese cornel (*Cornus officinalis*) are being collected in the forests and sold for traditional Chinese medicine purposes. On average, these activities generated additional 2,000 RMB/year/household in 2015 and increased to 5,000 RMB/year/household in 2025.

Some forests are adequate for oak-based tussah silkworm (*Antheraea pernyi*) farming, which provided for an additional income of about 1,500-2,000 RMB per household in 2015 and 3,000-4,000 RMB per household in 2025.

Most of the established protection forests have been declared public welfare forests, which provides the villagers some limited subsidies from Chinese national funds (11.2 RMB/mu/year from the government to the household).

- **Timber forests** (approx. 190 ha – indicator 1): The owners of the forests harvest cicadas in the forests, which are sold locally and exported internationally to South Korea. This provides 1,000-2,000 RMB per year per household. Additionally, leaves and mushrooms are harvested and sold locally, contributing to the income of the local population. These economic activities provide an additional annual income of RMB 800-1,000/mu per household.

<sup>1</sup> Indirect beneficiaries are individuals benefiting from: 1. employment and training opportunities created by the project; 2. enhanced rural incomes through project-induced development of eco-tourism, agritourism, and related activities in surrounding villages.

The poplar forests, planted in 2008 in abandoned terraced fields, were well maintained and should be harvested 25 years after planting. Considering their current state, they are likely to generate a meaningful contribution to the local households' income. When the final felling of timber forests will be done approx. in 2033, the yields are estimated at RMB 7,500 per mu, delivering an average household income of RMB 30,000 (equivalent to RMB 2,000 annually when amortized).

- **Economic forests** (approx. 1,900 ha – indicator 2): The economic forests visited during the evaluation mission showed that the yields were substantial to increase the farmers' incomes through the planting and harvesting of fruits, i.e. peaches (yield: 4000 RMB/mu/year), pears (yield: 4,000 RMB/mu/year), walnuts (yield: 2,000–3,000 RMB/mu/year or 15 RMB/kg), apricots (yield: 1,000 RMB/mu/year), and poplar (yield: 1000 RMB/mu/year). Current market prices are especially favorable for fruits, which is why farmers have now planted more fruit trees and less nut trees. Annual harvests of fruit-oriented economic forests (pears, peaches, etc.) generated approximately RMB 3,000–8,000 per household in annual income in 2015 and approximately RMB 8,000–16,000 per household in 2025. Annual harvests of nut-oriented economic forests (walnuts, etc.) generated approximately RMB 6,000–8,000 per household in annual income in 2015 and approximately RMB 3,000–4,000 per household in 2025.<sup>2</sup> Additionally, the economic forests create permanent employment as well as seasonal employment in the villages, where local farmers contribute to seasonal work on the economic forest plantations.
- **Forest closures and forest closures with enrichment** (approx. 16,300 ha): Similar to the productive protection forests, the sites visited showed that the local population collects wild mushrooms and herbs for their own use and selling, as well as some tree residues that are sold to surrounding mushroom farms for mushroom cultivation to generate some additional income. Additionally, tung oil seeds from the planted tung oil trees are collected for additional income generation.
- **Forest management - thinning/tending** (approx. 820 ha – indicator 1): This afforestation category mainly involves black locust forests (*Robinia pseudoacacia*). Local farmers generate supplemental income by practicing beekeeping during the black locust flowering season and harvesting honey. E.g., around 3,000 households in Lushi county participated in beekeeping, around 5000 persons engaged in the related industry; market price for honey from black locust is RMB 50/jin (500g), 7 honey processing enterprises operating locally. In 2025, the beekeeping activities yielded around 20,000 RMB of additional income per household.

Besides afforestation measures, there was a number of other measures implemented to achieve the outcome objective:

- **Animal husbandry grazing control program:** The intent of this component was to be proactive and give support to those animal farmers affected by reduced village grazing sites because of the project's afforestation and forest closure activities. Households utilize project-subsidized livestock pens for cattle and sheep farming, generating annual revenues of approximately RMB 3,000–8,000 per household. A potential risk of negative effects on the farmers was not confirmed by the interviewees.
- **Watershed management:** A positive effect on soil erosion control could be seen, however, in the future, forest management is necessary to maintain the positive effect. The watershed management measures under the project have demonstrated remarkable outcomes, particularly in Song County, which has emerged as a model site for integrated watershed governance. This case continues to serve as a benchmark for similar domestic watershed management initiatives. Currently, 90% of the afforested areas under the project have been incorporated into public welfare forest management. However, field visits of selected sub-compartments reveal that many forest stands require enhanced forest management to ensure stable growth and sustainable management. Addressing these needs will require additional funding sources and a phased implementation timeline.
- **Capacity building** (trainings to **Project Executing Agencies** (PEA) and farmers – indicator 3): Particularly in the first years of the project, numerous training events were conducted by the implementation consultant to train local farmers and PEA in sustainable forest management (e.g., PLUP, site preparation and general silviculture, forest management, fruit tree culture, animal husbandry support, soil and water control techniques, monitoring). During the site visits, farmers and PEA reported that the capacity building measures were very helpful to achieve the project results. In particular, the PLUP, at the time of implementation a new approach in the Chinese forestry sector, was considered very effective to ensure ownership and good participation of the beneficiaries in the project.

<sup>2</sup> The strong decline in income from nut trees is attributed to the market price decrease for walnuts, due to increased walnut farming and oversupply in Henan province. This led to farmers abandoning walnut farming and changing to more profitable fruit and nut trees over time.

- **Farmer subsidies for project participation** (indicator 4): Local farmers were paid subsidies to participate in the afforestation and forest rehabilitation activities carried out under the project. The subsidies were effective to motivate farmers' participation in the project. Many farmers received free seedlings, which helped them to grow plants for some additional income. However, naturally these subsidies only had a short-term effect on the economic situation of the local population, as they were not designed to generate a long-term income. It has to be noted that farmer subsidies were increased once from 20 RMB per day in 2005 to 40 RMB per day in 2010. However, in the later afforestation years, there was some reluctance of farmers to participate in the activities, as the subsidies were considered too low. More flexibility from the project to raise the subsidy would have strengthened the willingness to participate even more.

Additionally, some farmers have been appointed as ecological forest rangers, which provided them with an income of 3,600 RMB per household in 2015 and 7,200 RMB per household in 2025.

## 9. Quality of implementation

The project's implementation structure was rather complex, as it needed to take into account numerous project locations in four different counties. Therefore, the Henan Provincial Forestry Department served as the main implementation unit, which was responsible to coordinate with both the national level (state forestry department) as well as the four county forest departments. During the evaluation mission, all stakeholders confirmed that this implementation set-up was effective in implementing and coordinating the project's activities, despite the complex structure.

The PLUP and the issuing of long-term land use rights for the local farmers ensured that the interests of the local population were considered during the planning phase.

The operational plan of the project was reviewed and adjusted in 2009, 2010, and 2012. In some cases, the area targets for the individual project components changed significantly due to the challenges faced on-site. For example, the sites' conditions of the originally planned afforestation areas were poor and more suitable for protection forests than afforestation measures. The adjustment of the targets for the various afforestation categories and other project measures to the actual demand and local conditions were in line with the design of the project as an open program.

## 10. Unintended effects (positive or negative)

No negative or positive unintended effects on people or the environment were identified during either the planning or implementation phases. A potential risk to the livelihood of some farmers arising from the grazing control program did not materialize. An increased risk of fire due to the increased biomass arising from afforestation measures did also not materialize. The evaluation mission did not identify any unintended effects.

The project's participatory approach ensured that the needs of the local population were considered during project planning and implementation (bottom-up approach). Since the selected counties were all categorized as poverty counties according to national standards, a focus was laid on reducing poverty and inequality. No negative or positive unintended gender effects were identified during the evaluation.

### Rating summary of effectiveness: **successful (2)**

In summary, the effectiveness of the project measures was good. The project was flexible in adjusting its outputs and targets based on the local needs and conditions, which contributed to successfully meeting most targets. In particular, the measures targeting soil erosion control proved to be effective. With regard to reducing poverty of the local population, only some of the measures (esp. economic forests) were suitable to become the main long-term income source of local farmers. Other measures nonetheless contributed to an improvement of the livelihood and income situation by providing some additional short-term (i.e. labor subsidies) and long-term (i.e. selling of non-timber forest products such as herbs, mushrooms, cicada etc.) income for the local population. The effectiveness of the project is therefore rated as successful.

# Efficiency

## 11. Production efficiency

The grant amount foreseen for the project amounted to EUR 6 million. It was co-financed by an own contribution in the amount of EUR 4.9 million. Costs for afforestation and other soil erosion control measures amounted to 68% of the total project costs, costs for project management by the PEA and other operating costs to 14%, consulting measures to 10%, trainings to 4%, and equipment and vehicles to 4%. This share of costs is considered appropriate for FC projects in the forestry sector.

Due to the complexity of the project, continuous adjustments were made during implementation based on actual conditions. Adjustments to the area target were also made due to experienced increases in costs for afforestation measures, material costs,

labor costs and currency exchange costs, to which the project reacted in increasing the “protection forest” component, which was less costly than afforestation measures. Because of this complexity, the close cooperation of the five-level management system including the province, county, township, village, and farming households, was essential for the efficient implementation of the project. Additionally, the project implemented an extensive and complex monitoring and evaluation procedure, which was conducted in three stages for each plot of land and partial payments, served as an important basis for project expenditure reporting and reportedly improved the quality of implementation. In particular, each plot was monitored three times, releasing only partial payments each time to motivate the farmers to continue improving the plots until the final monitoring.

Considering the costs for technical input (advanced monitoring, mixed-forest technical design, skills training, PLUP), the afforestation measures of the project had higher costs than compared to nationally funded afforestation projects in China, since domestic projects did not include such technical input. The cost per hectare of afforestation ranged from 1,950 to 3,300 RMB, which was higher than in nationally funded projects at the time of implementation. All stakeholders interviewed reiterated that the higher initial costs led to a better quality and long-term viability of project results if compared to domestic projects.

The project implementation period was originally planned to last 8 years. The implementation phase began with the mobilization of the implementation consultant in 2007 and was completed in 2014, thus, no major delays were recorded.

The funds were pooled on the PEA's project account, which ensured the efficient distribution of funds to the respective stakeholders (county project offices, beneficiary farmers, etc.). A particularly innovative approach at the time were the direct labor subsidy payments to farmers via bank card, which were reportedly very fast and easy to implement, leading to a high farmer satisfaction for the participation in the project. Farmers particularly valued the timely disbursement via bank cards, which fostered their trust in the project.

## 12. Allocation efficiency

The project sites were located in a mountainous area with thin soil layers, high risk of soil erosion, low soil fertility, and limited agricultural output. At the same time, the project aimed to combine ecological goals with economic benefits. Therefore, given the difficult situation on site, the chosen outputs, such as protection forests and – where site conditions allowed – economic forests, were the only feasible ones in the area. For example, straw checkerboard barriers that are used in desert areas were not applicable.

Due to the positive effect on soil erosion and nature conservation, the allocation efficiency is rated generally positively. In addition to potential yields, projects in the field of forest resource protection also produce key ecosystem services that are difficult to quantify in monetary terms. These include avoided costs from natural disasters through erosion control, soil and water conservation, enhancement of biodiversity, the filtering functions of ecosystems, carbon sequestration and aesthetic values, which was important for the local population and enabled the development of eco-tourism.

Meeting the joint objectives of poverty alleviation and environmental improvement was a challenge. Poverty in the rural areas was largely a result of the lack of good agricultural land and the associated disadvantages of living in mountainous areas. Soils are often shallow or rocky with quite variable rainfalls. These conditions meant that afforestation was mainly for protection purposes and the sites were difficult. Through the coupling of economic and ecological goals, an assessment of the overall macroeconomic costs and benefits of the project is not possible. However, it can be seen that economic benefits for the population have been achieved, albeit most significant for the category of economic forests. It is plausible to assume that the achieved outcome could not have been reached more efficiently by different measures.

### Rating summary of efficiency: **successful (2)**

The efficiency of the project was successful. The project was implemented without major delays, and innovative approaches such as direct labor subsidy payments via bank cards enhanced farmer satisfaction and efficient fund distribution. Also, the allocation efficiency can be positively due to the significant environmental benefits and economic contributions, especially from economic forests.

## Impact

### 13. Overarching developmental changes

The adjusted impact-level objective was: *The project aimed at two goals at the impact level. First, the project area's soil erosion has been reduced. Second, the population's livelihood has improved.*

The following indicators, which have been adapted within the evaluation were used to measure the impact objective:

| Indicator                                                                                          | Status at time of review | Target value at EPE (re-view) | Actual value at PCR | Actual value at EPE                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) Erosion on project plots                                                                       | Not defined              | Not defined                   | achieved            | Soil erosion on the visited sample plots was low. On site, no signs of water wash or soil erosion could be seen.<br><br>Target value achieved                                                                                                                              |
| (2) Land productivity of project plots                                                             | Not defined              | Not defined                   | achieved            | The productivity on the visited sample plots was high.<br><br>Target value achieved                                                                                                                                                                                        |
| (3) The local population considers the total effects of the project impacts predominantly positive | Not defined              | 70 %                          | achieved            | There was no comprehensive data collection before and after project implementation to assess this indicator. In the beneficiary interviews conducted, all beneficiaries confirmed that the project had a positive impact on their livelihood.<br><br>Target value achieved |
| (4) Average income in the project regions                                                          |                          |                               |                     | Income has increased significantly.<br><br>Target value achieved                                                                                                                                                                                                           |

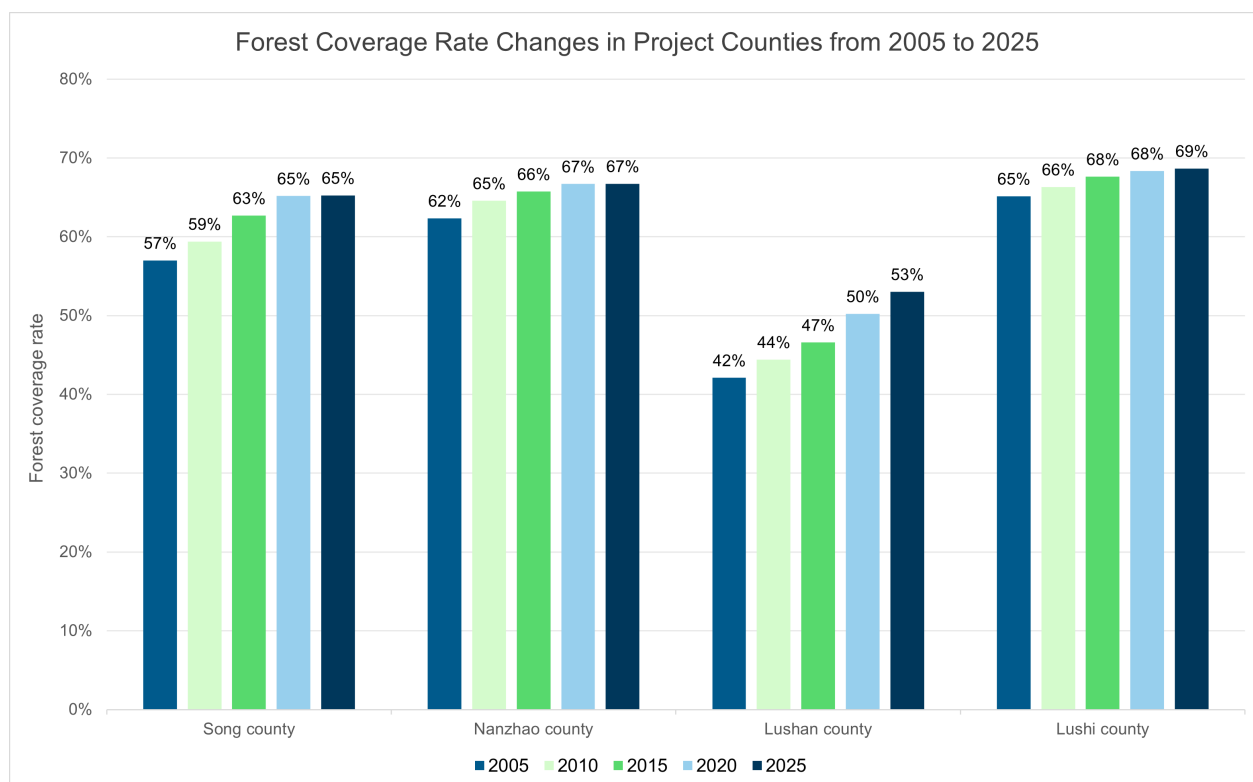
**Table 3:** Impact target achievement.

**Source:** Final Report (2015), PEA data (2025)

Overall, it can be concluded that the impact level target goals were achieved. Several data and information helped to inform the achievements of the indicators as well as validating the contributions to the development objectives. This discussion is elaborated in the next section.

#### 14. Contribution to overarching intended developmental changes

As the project was implemented in ecologically important regions with respect to the most severe soil erosion, the impact of the project was significant with regard to reducing soil erosion in the project area. Data from the PEA show that the regional forest cover was significantly increased, which helps to conserve water sources and reduce soil loss (see figure 3). At the same time, the measures improved the environmental conditions in the target regions, which had a positive impact on the living conditions of the population due to increases in income from selling of forest products as well as an increase in eco-tourism. The ecological impacts, incl. the increase in forest cover, improved biodiversity, as well as a plausible contribution to the reduction of greenhouse gases were positive.



**Figure 3:** Forest cover rate changes in project counties from 2005 to 2025.

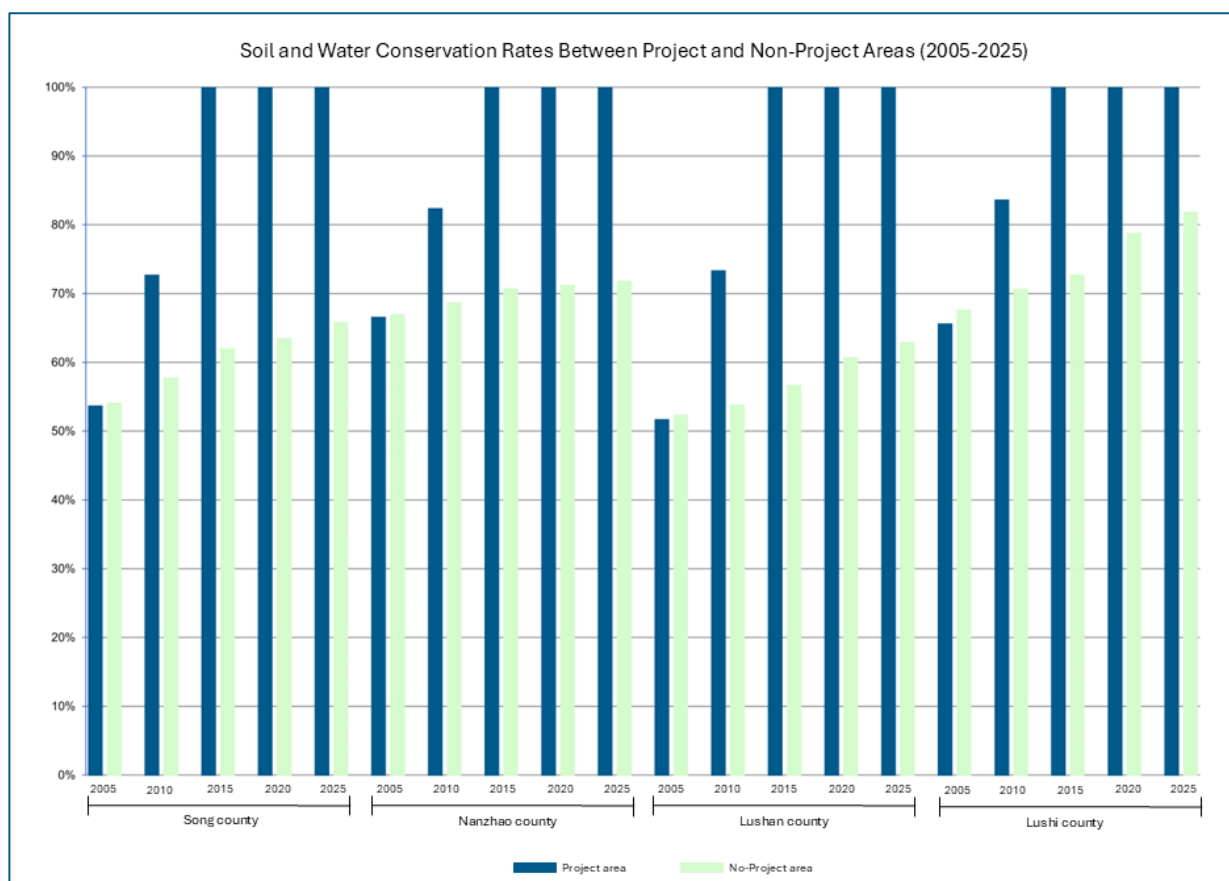
**Source:** Own illustration., data: Henan Forestry Development Agency.

With regards to ecological effects, the soil and water conservation rate (indicator 1), which is defined as the proportion of non-soil erosion area to the total area within a region, serves as a core indicator that comprehensively reflects the effectiveness of soil erosion prevention and control measures as well as the inherent soil and water conservation capacity of the natural environment. The rate of 100% means no soil erosion takes place in a specific area, while 80% means that 80% of the area has no soil erosion in a specific region. Thus, the indicator measures the effectiveness of efforts to prevent soil erosion and retain water in a given area. Specifically, it quantifies the proportion or percentage of land where measures have been implemented to reduce soil loss and improve water retention, such as terracing, planting vegetation cover, building check dams, or other conservation practices. This rate helps assess how well an area is protected against degradation, contributing to sustainable land management and agricultural productivity. Figure 4 illustrates that the soil and water conservation rate has increased in all four project counties over time in the project areas and the increase was higher than in areas that were not part of the project, indicating that the project (2005-2015) has contributed to the measures that are aimed at soil and water conservation.

With regard to the impact on poverty reduction, the incomes of households have significantly increased over time (Indicator 4). From 2005 to 2014, the per capita annual income of farmers in the project counties changed significantly, increasing by 250%, from 2,000 RMB to 7,500 RMB in 2014. The per capita poverty income standard in 2014 was 2,736 RMB, or 40% of the average farmer's income. During this period, the absolute number of people in poverty decreased by 35%, but significant poverty still existed.

From 2015 to 2023, the per capita income of farmers in the project counties increased from 8,140 RMB/year to 15,906 RMB/year, representing a 95% growth. In 2024, the average annual forestry income of participating households exceeded 3,000 RMB per household — significantly higher than that of project households in 2013.

Finally, comparing households in the project counties that participated in the project to households outside the project areas, shows how household in the project area experienced a stronger income growth. Figure 5 shows the average annual per capita income from 2005 to 2025 of in the project areas in each county and the rest of the county where the project was not implemented. While no causality can be concluded, the figures indicate a higher per capita income in the project area starting from 2010.



**Figure 4:** Soil and Water Conservation rates in project and non-project areas.

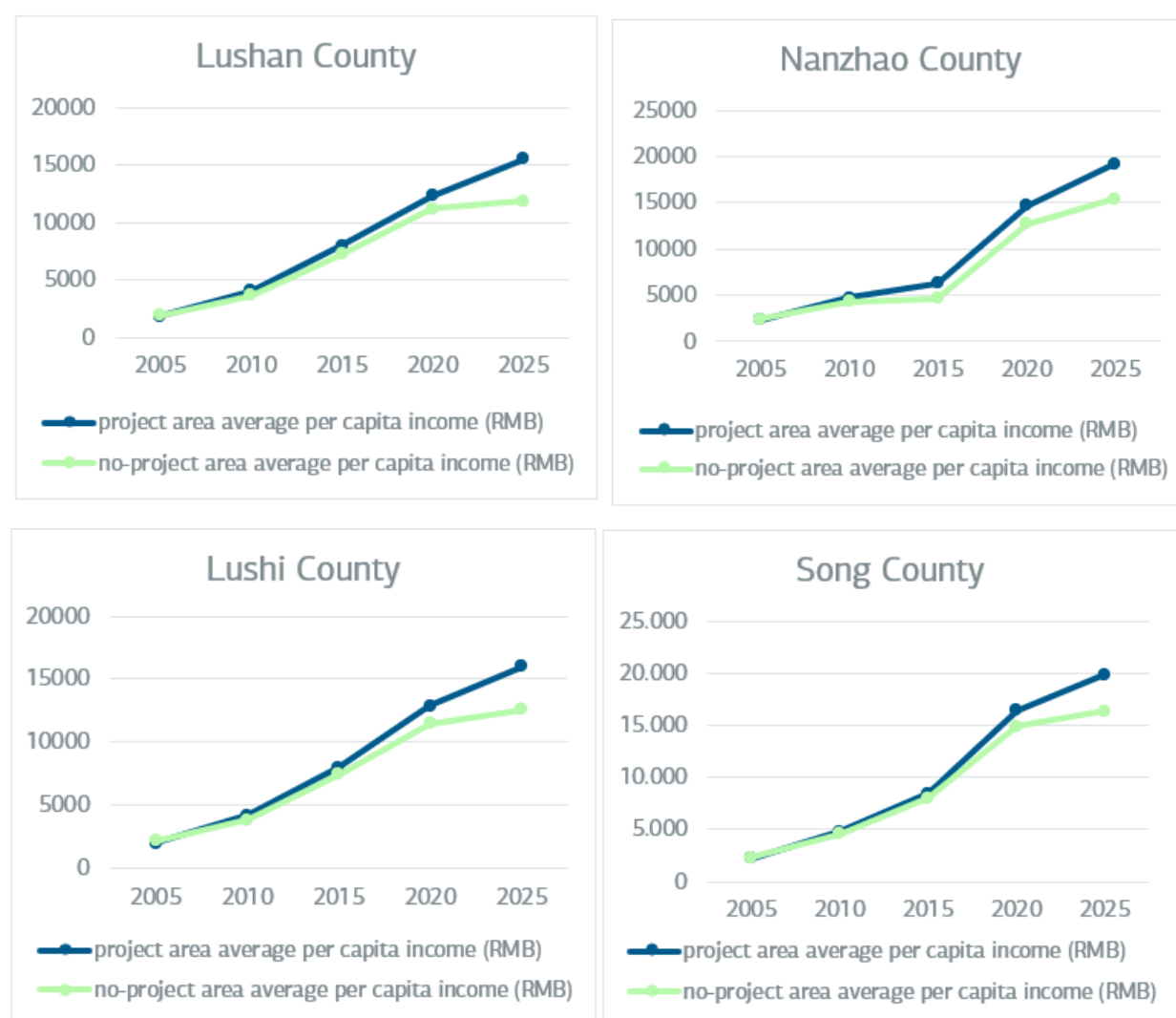
**Source:** Henan Provincial Forestry Department.

The project contributed to the improvement of the income situation of households in various ways. During the project implementation phase, subsidies to farmers for the participation in the project provided a significant short-term increase in income. In the first years of implementation, labor subsidies amounted to RMB 20/day and were increased to RMB 40/day in 2010. In 2005, many households in the project villages were below the poverty line of a per capita annual income of RMB 652. Therefore, an annual subsidy of about RMB 350 per person provided an additional income equivalent of over 50% of their existing income, significantly boosting their cash at the time. The poverty line increased to RMB 2,300 per capita income in 2014. Thus, the impact of the project in alleviating poverty needs to consider the considerable socio-economic change in China. In addition to labor subsidies, free seedlings were provided to farmers for economic forests, over time generated additional income.

Today, the local population earns additional income from collecting and selling non-timber forest products (esp. tung oil seeds, tree residue, leaves, cicadas, herbs, mushrooms, beekeeping/honey), which improves the income situation but is not a major source of income. These alternative income streams have been increasing over time (see above, effectiveness).

Additionally, the households managing protection forest and forest guards receive a wage subsidy from the government.

Significant medium- to long-term improvements were seen for those households cultivating economic forests. The improved income situation is especially visible for the net forestry income, which is defined as the income achieved from the sale of forest products. In 2013, the average net forestry income per household in the project households of Song County, Lushi County, Lushan County, and Nanzhao County was 770 RMB, 574 RMB, 645 RMB, and 754 RMB, respectively. In contrast, the income of households not participating in the project was 0 RMB, 205 RMB, 40 RMB, and 130 RMB, respectively. The forestry income of the project households in the four counties was much higher than that of households not participating in the project, indicating that farmers participating in the project saw a rapid increase in direct economic income from forestry. These represent the main income of some households and additionally create permanent and seasonal employment in the village. In one special case, the proceeds from the economic forests have even been used to invest in eco-tourism (restaurant, hotel), which further creates economic benefits. The development of agritourism facilities (pick-your-own farms, nature education bases, etc.) generates approximately RMB 30,000 in annual income for the owner.



**Figure 5:** Per capita income in project and non-project areas in the project counties.  
**Source:** Henan Provincial Forestry Department.

It can be concluded that the livelihood of the population has been improved through the project measures. Meeting the dual goals of environmental improvement and poverty reduction was challenging. Addressing poverty reduction in rural areas, largely as a result of the lack of suitable agricultural land and the associated disadvantages of living in mountainous areas, with afforestation measures could lead only to a limited impact (as the afforestation measures were mainly for protection purposes). Farmers who were involved in protection forests, forest closures, and forest management, have experienced short-term improvements through receiving labor subsidies, and continue to generate some additional income from non-timber forest products, which is not their major income source. Despite this, the improvements are much more significant for those who benefitted from economic forests created, where the forests have become a major income source.

The project was considered as a best-practice in the time of implementation, exemplifying new methods of sustainable forest management (esp. PLUP, advanced afforestation techniques, close-to nature forest management, integrated approach (including not only forestry administrations, but also water and husbandry administrations and participation of women's federations etc.)). After project completion, by developing technical manuals, organizing field visits, and conducting training sessions at various levels, the PEA has spread the successful project experiences across the province. These experiences have provided important references for subsequent projects, such as those funded by the European Investment Bank, and for forestry activities in the "Eco-Province Construction Project". Additionally, several publications have been published based on the project's experiences (book, journal papers). Based on the project's practice, three Henan provincial standards were developed: Technical Regulations for Monitoring of Forestry Foreign Financing Projects, Technical Regulations for Forest Management of Forestry Foreign Financing Projects, Guidelines for PLUP in Forestry.

## 15. Contribution to overarching unintended developmental changes

No evidence of unintended developmental changes was identified during the ex-post evaluation.

### Rating summary of impact: **successful (2)**

The project significantly reduced soil erosion in the project area and improved land productivity, with soil erosion on sample plots being low and productivity high. The local population predominantly viewed the project impacts as positive, confirming improvements in their livelihoods. The project increased forest cover and enhanced income through economic forests and non-timber forest products. Although poverty reduction was limited due to the mountainous conditions and protective nature of many afforestation measures, the overall ecological and socio-economic impacts were positive.

## Sustainability

### 16. Capacities of beneficiaries and stakeholders

The responsibility for project implementation was with the Henan Provincial Forestry Department and the Henan Provincial Finance Department. Both departments were PEAs. The Finance Department exercised overall financial supervision whilst the Forestry Department, the de-facto implementing body of the project, was responsible for financial and technical control and project administration and management. County Project Offices (CPOs) were established in the County Forestry Bureaus to carry out the project activities whilst the forestry staff of the Township Agricultural Service Centers were responsible for mobilizing villagers and implementing village level and field level project works. Leading groups on different administrative levels and the coordinating function of the Chinese State Forestry Administration provided the institutional environment for smooth project implementation. The project established a strong interdepartmental cooperation mechanism, in which the PEA worked closely with other departments and institutions such as finance, water resources, agriculture, and environmental protection, as well as other coordination units on municipal, county and township-level. The local governments (counties and townships) were responsible for implementing land certification and subsidy distribution.

The Henan Provincial Forestry Department remains an active cornerstone in the development of the province's forestry sector, ensuring that the impacts achieved by the project are maintained. The strong cooperation ties between the Henan Provincial Forestry Department and County Forestry departments have remained in place also after the project was completed, since cooperation in the forest sector between provincial and county levels continued also outside of the project. The counties continue to monitor the forests in their respective areas of responsibility.

### 17. Contribution to supporting sustainable capacities

The capacities of the local farmers and PEA were strengthened with the help of training measures during the implementation phase of the project. Farmers were trained in all the skills required to establish the project afforestation and conduct forest management. Topics included site preparation and spacing, planting, tending and beating-up. On-the-job farmer training was greatly appreciated by farmers and was essential for meeting the project targets of area, survival, mixture and quality. Overall, there were 1,217 farmer training events reported, 177 in the classroom, 803 in the field and 404 as combined classroom and field trainings. Courses ranged from 1-6 days each. During the evaluation mission, farmers confirmed that they still used the skills acquired in the project.

The project had a comprehensive three-time monitoring system which was linked to the payment system to farmers. This helped to strengthen capacities of the farmers involved and to secure the sustainability of the measures. Each plot was monitored three times and payments were made in stages accordingly. In domestic projects at the time, the plots were only monitored at the end of the implementation period and all remuneration was paid all at once, which resulted in motivation to maintain the forests after they had received their compensation.

Trainings directed towards the PEA (PPO) and CPOs were targeted to increase the capacity for project implementation. Besides trainings in sustainable land use management techniques and afforestation monitoring, overall project management skills were enhanced with targeted trainings such as financial management, and accounting. The PEA and CPOs reported that this helped them to successfully implement the project.

### 18. Durability of impacts over time

The positive impact on soil erosion control that was seen during the evaluation mission was remarkable, even more so considering that the evaluation took place 10 years after project completion. No soil erosion was identified during the site visits. The forest land established for the whole project area was maintained, and patrol work such as fire prevention and pest control were ongoing. The protection result was satisfactory, as the stakeholders reported that there were almost no adverse effects by fire

and pests. The maintenance of soil and water conservation engineering measures was satisfactory, and the function of soil erosion control was continuously exerting. The sites of mountain closure were generally well protected, and some have been included into the national forest closure project.

However, after the project was completed in 2015, some maintenance activities were not fully continued because of insufficient financial support and incentives. For example, timber forests (poplar) were not properly maintained after 2015. Additionally, after the project ended, both the national and Henan provincial governments vigorously promoted walnut cultivation, resulting in high yields but low prices. Additionally, rising labor costs led to a reluctance among growers to invest in normal operations, making walnut plantations financially unsustainable. Thus, the adverse unintended policy effect resulted in an oversupply of walnut and decreased prices thereof. Eventually, farmers were not motivated anymore to engage in the management of economic forests that consist of walnut trees, as the management is relatively extensive. As a result, walnut trees were very dense, and no pruning or fertilizing was done at the time of the evaluation. The total area of walnut forests of the project was 104 ha, accounting for 0.35% of the total afforestation area. The forest establishment cost of walnut forests accounted for 1.4 % of the total afforestation costs of the project. Therefore, this component can be considered rather small in proportion to all afforestation activities. Nonetheless, the counties have started to generate ideas to increase the income from walnut trees, such as 2nd tier industry processing (walnut flower tea, medicines). This has to some extent improved farmers' willingness to continue managing walnut tree forests.

During the site visits it could be seen that grazing was not fully controlled, which could jeopardize sustainability in the future. Currently, livestock production in the project counties is predominantly characterized by large-scale, intensive farming systems, which has significantly impacted traditional grazing practices. Due to the economies of scale achieved by intensive systems as compared to grazing, pastoral activities are projected to exert limited future influence on forest stands. The animal husbandry sheds that were developed during the project were only partly used at the time of evaluation. This was because animal farming in the region has developed from being managed by small farmers to large-scale animal farming. Some livestock pens (for cattle and sheep) were renovated by local big households and remain in use. In addition, besides the grazing ban, the animal feed is now being purchased, decreasing the need to graze in forest land, which both contributed to lower soil erosion.

According to the "Henan Province 14th Five-Year Forestry Protection and Development Plan (2021-2025)", the province planned 10 million mu ( $\approx 666,667$  ha) of forest tending tasks. Preliminary statistics show that from 2021 to 2024, the four project counties each completed an average of 200,000 mu ( $\approx 13,333$  ha) of forest tending annually, accounting for over 30% of the province's total forest tending area. The current subsidy rate stands at 400 RMB/mu. Continued expansion of forest management across Henan is expected to be implemented during 15th Five-Year Period (2026-2030) especially in the four project counties due to their well-preserved forest resources.

Most of the established protection forests have been declared public welfare forests, which provides the villagers some limited subsidies (11.2 RMB/mu/per year from the government to the household).

In the four project counties, forestry is a crucial part of the economy. Therefore, the local authorities (incl. forest agencies of Henan Province and county forest offices) put a high attention on the monitoring of the forestry sector. The trainings provided by the project have helped to improve the practices.

While the short-term economic benefits of labor subsidies had ceased after the project had been completed, the income that can be generated from the forests (economic and others) has been continuously increasing with the growth of the trees (see efficiency). However, this also depends on the market conditions (e.g., the profit for walnuts has decreased over time).

Despite the downturn in the walnut market, tree species such as *Forsythia suspensa*, *Cornus officinalis*, and *Gleditsia sinensis* have started to unfold their significant market potential in traditional Chinese medicine (TCM), cosmetics, and detergents in the project regions. These species are also key afforestation choices. Meanwhile, sustainable oak (*Quercus*) management represents a future development priority. Oak thinning operations have been included in China's national forest tending program, with subsidies of 500 RMB per mu. The residual biomass can be used as raw material for shiitake mushroom cultivation, while oak forests support adjacent industries, such as silkworm farming and eco-tourism. This initiative is a key focus of Henan province's forestry development plan for the 15th and 16th Five-Year periods.

#### **Rating summary of sustainability: successful (2)**

The project established strong interdepartmental cooperation and significantly strengthened the capacities of local farmers and institutions through extensive training and a comprehensive three-stage monitoring system linked to staged payments, which enhanced sustainability. Soil erosion control and forest maintenance are still ongoing even 10 years after project completion, with ongoing patrols and inclusion of some areas into national forest closure programs. Only a few some maintenance activities declined due to insufficient financial support and incentives after project completion. Despite these challenges, the project's ecological and socio-economic benefits continue to unfold.

## Overall rating: **successful (2)**

The overall assessment of the project is rated as successful (2) according to the OECD DAC criteria. The project was highly relevant and coherent. It effectively achieved sustainable land use management and soil erosion control in the project region. It increased forest cover, improved environmental conditions, and contributed positively to biodiversity and climate action. The project improved livelihoods through economic forests and labour subsidies, although its impact on poverty reduction was limited due to the mountainous conditions and protective focus of many afforestation measures. The project demonstrated strong institutional cooperation, participatory approaches, and innovative monitoring and subsidy mechanisms, which enhanced implementation quality and sustainability, despite some challenges in maintaining activities post-project. Even 10 years after project completion, the results of the project are being maintained and the positive impacts continue to unfold.

## Contribution to Agenda 2030

The project contributed to Sustainable Development Goal (SDG) 1 (no poverty), 10 (reduced inequalities), 13 (climate action), and 15 (life on land):

*Principle of universal validity:* The project significantly contributed to SDG 13 by increasing forest cover, which contributed to carbon sequestration and the reduction of greenhouse gases, supporting climate mitigation efforts. Through sustainable land use management, afforestation, soil erosion control, and biodiversity conservation, the project enhanced ecosystem health and resilience in ecologically important regions, which contributed to SDG 15. At the same time, by targeting poor rural counties and involving local farmers in PLUP and afforestation activities, the project helped to reduce income disparities between urban and rural populations (SDG 10), while also contributing to poverty alleviation of rural households through labor subsidies, free seedlings for economic forests, and income from non-timber forest products (SDG 1).

*Shared responsibility and accountability:* The project can be seen as a joint Sino-German contribution to the achievement of the SDGs.

*Interplay of economic, ecological and social development and inclusivity:* The project combined social, economic and ecological goals in that it chose measures that contributed to poverty alleviation and reduction of inequality (SDGs 1 and 10) that at the same time had positive ecological effects on soil erosion and environmental protection (SDG 13).

# Methodology

## Evaluation methodology

The ex-post evaluation follows the methodology of a rapid appraisal, i.e. a data-based, qualitative contribution analysis, and represents an expert opinion. The project is attributed effects based on plausibility considerations, which are based on a careful analysis of documents, data, facts and impressions. Where possible, this also includes the use of digital data sources and modern techniques (e.g. satellite data, online surveys, geocoding). The causes of any contradictory information are investigated, attempts are made to resolve them, and the assessment is based on statements that are confirmed by several sources of information (triangulation), where possible.

The analysis of the effects is based on assumed causal relationships, documented in the impact matrix developed during the project appraisal and updated during the ex-post evaluation, if necessary. The evaluation report sets out arguments as to why certain influencing factors were identified for the effects observed and why the project under review probably made a certain contribution (contribution analysis). The context of the development measure is taken into account in terms of its influence on the results. The conclusions are put into relation to the availability and quality of the data basis. An evaluation concept serves as the reference framework for the evaluation.

The method offers a balanced cost-benefit ratio for project evaluations, on average, with a balance between knowledge gain and evaluation effort, and allows for a systematic assessment of the effectiveness of DFG projects across all project evaluations. Individual ex-post evaluations cannot therefore meet the requirements of a scientific assessment in the sense of a clear causal analysis.

The main objective of the evaluations (knowledge interest) is to measure impacts, provide accountability, promote transparency and enable institutional learning.

### Type of evaluation:

*Field mission to the project area (sample plots in each county) with a national expert.*

### Key questions of the evaluation according to the evaluation concept:

- The Project underwent a 3-cycle monitoring and evaluation system (check by PEA, check by province project office, check by external consultant): Did this help to improve the outputs/outcome and should be adapted in similar projects, or was the cost for extensive monitoring higher than the assumed benefit?
- Is sustainable land use management is still in place? Is soil erosion still reducing? If not, why not?

### Non-public (internal) documents

*Internal project documents.*

### Directory of public sources

**State Council** (2001): "Notice of the State Council on Issuing the Outline of Poverty Alleviation and Development in Rural China" (2001-2010) (Guofa [2001] No. 23), published on 13.06.2001

**State Forestry Administration** (2001): "Notice of the State Forestry Administration on Issuing the Eleventh Five-year Plan and Medium – and- Long Term Plan for Forestry Development" (Lin Ji Fa [2006] No. 56), published on 14.04.2001

**The People's Government of Henan Province** (2007): "Notice of the People's Government of Henan Province on Printing and Distributing the Construction Plan for Henan Forestry Ecological Province" (Yu Zheng [2007] No. 81), published on 23.11.2007

**The People's Government of Henan Province** (2013): "Notice of the People's Government of Henan Province on Printing and Distributing the Plan for the Improvement Project of Henan Forestry Ecological Province Construction (2013-2017)" (Yu Zheng [2013] No. 42), published on 08.06.2013

**State Council** (2015): "Reply of the State Council on the National Soil and Water Conservation Plan" (2015-2030) (Guohan [2015] No. 160), published on 10.04.2015

**Office of the People's Government of Henan Province** (2017): "Notice of the General Office of the People's Government of Henan Province on Issuing the "Thirteenth Five Year Plan" for Poverty Alleviation in Henan Province" (Yuzhengban [2017] No. 24), published on 25.01.2017

**Henan Provincial Department of Water Resources** (2016): "Henan Province Soil and Water Conservation Plan (2016-2030)", published on 01.06.2016

**The People's Government of Henan Province** (2018): "Notice of the People's Government of Henan Province on Printing and Distributing the Forest Henan Ecological Construction Plan (2018-2027)" (Yu Zheng [2018] No. 28), published on 01.09.2018

**State Council General Office** (2021) "Guiding Opinions of the General Office of the State Council on Scientific Afforestation" (Guobanfa [2021] No. 19), published on 02.06.2021

**Henan Provincial Forestry Bureau** (2022): "Henan Province's 14th Five-Year Plan for Forestry Protection and Development", published on 01.04.2022

**National Forestry and Grassland Administration** (2022): "National Land Greening Plan Outline (2021-2030)", published on 09.09.2022

**Office of Henan Provincial Party Committee and Office of Henan Provincial People's Government** (2024): "Implementation Plan for Strengthening Soil and Water Conservation in the New Era in Henan Province", published on 25.01.2024

### **Data sources and analysis tools**

On-site data collection, partner monitoring data, interviews during site visits.

### **Project sites visited**

Lushan, Nanzhao, Lushi, and Song County in Henan Province, People's Republic of China

### **Interview partners and modality (in person, virtual/by telephone, in writing)**

Henan Provincial Forest Department (in person), Henan Provincial Finance Department (in person), County Forestry Bureaus (in person), farmer and village representatives of all counties (in person during site visits).

### **The following aspects limited the evaluation**

Due to the large project area spread out in four counties in Henan province, only exemplary plots could be visited during the evaluation mission. Due to security restrictions at the time of the evaluation mission, two out of four project counties were only accessible to Chinese nationals (no entry for non-Chinese nationals). Therefore, the Chinese technical advisor visited these two project counties without the international expert.

## Assessment methodology

A six-point scale is used to assess the project according to OECD DAC criteria, with the exception of the sustainability criterion. The scale values are as follows:

- Level 1** Very successful: results significantly above expectations
- Level 2** Successful: results fully in line with expectations, without significant shortcomings
- Level 3** Moderately successful: results below expectations, but positive results predominate
- Level 4** Moderately unsuccessful: significantly below expectations and negative results dominate despite recognisable positive results
- Level 5** Unsuccessful: despite some positive partial results, the negative results clearly dominate
- Level 6** Highly unsuccessful: the project is useless or the situation has deteriorated

The overall rating on the six-point scale is based on a project-specific weighting of the six individual criteria. Levels 1–3 of the overall rating indicate a 'successful' project, while levels 4–6 indicate an 'unsuccessful' project. It should be noted that a project can generally only be classified as "successful" in terms of development policy if both the achievement of objectives at the outcome level (effectiveness) and impact level, as well as sustainability, are rated at least as "moderately successful" (level 3).

The annex to this report is available upon request (German only).

## Imprint

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