



Report Number: ICRR0022475

1. Project Data

Project ID

P129563

Project Name

Anhui Yellow Mt. New Countryside Demo.

Country

China

Practice Area(Lead)

Urban, Resilience and Land

L/C/TF Number(s)

IBRD-83090

Closing Date (Original)

30-Jun-2019

Total Project Cost (USD)

96,579,192.14

Bank Approval Date

27-Dec-2013

Closing Date (Actual)

30-Jun-2020

IBRD/IDA (USD)
Grants (USD)

Original Commitment

100,000,000.00

0.00

Revised Commitment

96,579,192.14

0.00

Actual

96,579,192.14

0.00

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2. Project Objectives and Components

a. Objectives

According to the Financing Agreement (FA, p. 5) and the Project Appraisal Document (PAD, paragraph 16), the Project Development Objective (PDO) was "to improve the quality of services and income generating opportunities available to rural households in selected villages of Huangshan municipality." This would be achieved by upgrading infrastructure services, restoring and preserving cultural heritage assets and promoting high value-added agriculture and countryside tourism (PAD, paragraph 16).



This review will assess project performance against the following objectives:

- to improve the quality of services available to rural households in selected villages of Huangshan municipality.
- to improve income generating opportunities available to rural households in selected villages of Huangshan municipality.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

1. Infrastructure Improvement: (US\$66.46 million at appraisal, increased in two restructurings to US\$71.59 million; US\$74.78 million actual). This component would finance the construction and upgrading of basic infrastructure including, village roads, bridges, sidewalks, domestic and tourism pathways, street lightings, and associated subsurface infrastructure services. This component would also finance the construction and/or rehabilitation of safe and reliable piped water supply and sanitation installations; construction of drainage systems, sewer networks, and low-cost and environmentally appropriate treatment and disposal facilities for storm and wastewater management. In addition, upgrading embankments and river clean-up for flood prevention, environmental and recreational uses would also be financed. Lastly, this component would finance the rehabilitation of small dams, ponds, and canals for irrigation and drainage. In the 2016 restructuring (see Dates below), two new roads were added. In the 2019 restructuring, 11 new rural infrastructure sub-projects replaced some planned works that were completed even before loan effectiveness and were no longer part of the project (ICR, paragraph 19).

2. Cultural Heritage Conservation: (US\$20.72 million at appraisal, modified in two restructurings to US\$18.31 million; US\$15.58 million actual). This component would finance restoration, preservation, and reuse of historic buildings for social, cultural, village environment, and tourism development purposes. Financing would (i) address the physical deterioration and improvement of historical buildings' structural integrity, physical safety and functionality; (ii) provide sub-grants to rehabilitate privately-owned houses; (iii) improve signage of restored buildings; (iv) facilitate adaptive reuse of local cultural heritage assets; (v) prepare cultural heritage conservation plans for selected villages; and (vi) disseminate information on selected cultural heritage assets. In the 2016 restructuring, some planned activities were dropped because these were self-financed and completed by the government (see also Section 4 Efficacy below). Low participation reduced the allocation for sub-grants from US\$1.08 million to US\$110,000. In the 2019 restructuring, the sub-grants were further reduced to US\$86,000. Continued low participation eventually cancelled this sub-activity, replaced by a few historic buildings for restoration.

3. Enhanced Economic Opportunities: (US\$21.47 million at appraisal, modified in two restructurings to US\$10.61 million; US\$20.90 million actual). This component would finance the development of intensified production and improved quality of high-value agriculture products, including initiatives to obtain green and organic certification. This component would also provide sub-grants to eligible community associations such as producer associations and cooperatives for their development activities. The development of income-generating tourism services would also be financed, such as (i) adapting existing buildings,



promoting village tourism, and training of villagers in tourism industry skills; (ii) improving facades of existing houses and buildings to promote visibility; and (iii) supporting tourism service centers, exhibition and performance spaces, parking lots, public toilets, and public spaces such as squares and exercise facilities; and (iv) sub-grants to support eligible rural tourism associations carry out their activities. Finally, this component would also finance the construction of facilities and exhibition centers for local agriculture and tourism products. In the 2016 restructuring, procurement savings and cancellation of low priority activities reduced the allocation of this component. In the 2019 restructuring, two special agricultural bases (or farms) were added to this component.

4. Institutional Support: (US\$5.29 million at appraisal, all IBRD, reduced in 2016 to US\$3.79 million, further reduced in 2019 to US\$2.51 million; US\$2.81 million actual, all IBRD). This component would finance technical assistance in: (i) strategic research and planning, including new countryside development and market-led village-based tourism; and (ii) municipal infrastructure, cultural heritage, tourism, high-value agriculture, environment, social and economic aspects. This component would also finance project implementation by the Huangshan Municipality, including: (i) capacity development for management, operation and maintenance (O&M) of project outputs; (ii) information dissemination; (iii) financial, project management, and project monitoring and evaluation systems; (iv) equipment (hardware and software); and (v) training, studies, and consultancies. In the 2016 restructuring, the technical assistance to prepare "Beautiful Village Development Master Plan" was cancelled because this was now covered by another government program. In the 2019 restructuring, a socio-economic impact study and beneficiary survey were added.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The total project cost was US\$114.07 million consisting of an IBRD loan and counterpart financing (see below).

Financing: The International Bank for Reconstruction and Development (IBRD) financed this investment project with a loan of US\$100 million. The loan disbursed 96.33 million, excluding the US\$0.25 million front end fee. The balance was cancelled.

Borrower Contribution: The government committed US\$13.94 million in counterpart financing at appraisal and disbursed US\$17.74 million at closing. The disbursed amount included US\$10.9 million from contingencies (ICR, Annex 3, footnote c).

Dates: The project was approved on December 27, 2013 and became effective on May 30, 2014. The Mid Term Review (MTR) was conducted on February 20, 2017. The original closing date was on June 30, 2019. The actual closing date was on June 30, 2020. There were two Level 2 restructurings, the first on December 19, 2016 and the second on June 26, 2019. Both restructurings made changes to the components, cost allocations, and the Results Framework, including adding or dropping outcome indicators and adjusting target values of both final and intermediate outcome indicators (see Section 4 on Efficacy below). The second restructuring adjusted costs due to exchange rate gains and savings from competitive bidding, and extended the loan closing date by one year to complete activities that were added or delayed due to bad weather.

Split Rating: A split rating assessment was not applied, as the revisions of the outcome targets increased the level of ambition of the PDO. The outcome indicators - both baselines and target values - were revised



and approved by the Regional Vice President during the two restructurings. According to the Task Team in their April 12, 2021 email to IEG, the adjustments in baselines and target values were made to consider the most recent population statistics during the restructurings, and the sub-projects were added as a result of loan savings. Exchange rate gains, unallocated funds, and lowered costs from competitive bidding generated these loan savings (see Section 4 Efficacy below).

3. Relevance of Objectives

Rationale

The PDOs remain relevant to the country's plans and the World Bank's partnership strategy for the country.

Country Context: The urban - rural divide in China is characterized by differences in economic opportunities, income disparity, and access to infrastructure services. In 2010, the average per-capita disposable income among rural residents was less than one third that of urban residents (PAD, paragraph 1). In 2006, a New Socialist Countryside Scheme (NSCS) targeted rural communities, including Huangshan municipality, to increase farmers' incomes, diversify their employment opportunities, enhance their living conditions, and strengthen their self-governance (PAD, paragraph 2). Owing to its rich Huizhou cultural architecture dating back to the Ming dynasty, Huangshan municipality was designated a UNESCO World Heritage site. By 2010, tourism revenues accounted for 65 percent of its municipal GDP while agriculture contributed 13 percent (PAD, paragraph 6). In response to NSCS, the municipality initiated a five-year cultural heritage conservation strategy called "A Hundred Villages, A Thousand Buildings." The strategy aimed to improve the overall village environment, invest in basic infrastructure, and build its tourism management capacity by strengthening tourism cooperatives, regulating businesses, and establishing standards of service.

Alignment with Country Priorities: The PDOs were aligned with the agricultural modernization and countryside development objective of the country's 13th Five Year Plan (FYP) for 2016-2020. The PDOs were highly relevant to the government's 2018 Rural Revitalization Strategy to prioritize investments in agriculture, rural areas, and farmers in an effort to promote integrated development of urban and rural areas, strengthen rural governance systems, and ensure food security. The PDOs were also aligned with the State Administration of Cultural Heritage's 2015 Circular on Strengthening the Daily Maintenance of Ancient Buildings. Furthermore, the PDOs contributed to the government priority in green development contained in its three-year Action Plan for the Improvement of Rural Human Settlement Environment.

Alignment with Bank Strategy: The PDO was highly relevant to the World Bank's Country Partnership Framework (CPF) for China (FY2020-25). The CPF focused on strengthening policies and institutions, addressing regional and global public goods, fostering the private sector, supporting critical services in lagging regions, and strategic piloting of approaches to address key development priorities. In particular, the PDO contributed to the three engagement areas that corresponded to China's key development challenges - managing the transition to slower growth; promoting greener growth and more efficient use of natural resources; and reducing disparities in accessing quality public services and between rural and urban areas (CPF, paragraph 43). The PDOs supported two of three engagement areas: (2) Promoting Greener Growth by improving sanitation services in support of CPF Objectives 2.2 to reduce air, soil, water and marine plastics pollution. By promoting environmentally friendly agriculture practices and improving the



quality of high-value agricultural production, the PDO supported CPF Objective 2.3 (to demonstrate sustainable agriculture practices and improve food system quality and safety). By training farmers on tourism services, cultural heritage conservation, and agriculture industries., the PDOs supported CPF engagement (3) Sharing the Benefits of Growth, in particular CPF Objective 3.2 (to enhance the quality of early learning and skills development programs) (ICR, paragraph 28).

Previous Bank Sector Experience in the Country: The Bank supported the government's new countryside development agenda through the (i) Ningbo New Countryside Development Project (2009); and the (ii) Chongqing Urban and Rural Integration Project (2010). Projects in cultural heritage protection and conservation projects included (i) the Gansu cultural and natural heritage protection and development project (2008), (ii) the Guizhou cultural and natural heritage protection and development project (2009), and (iii) the Shandong Confucius and Mencius cultural heritage protection and development project (2011). Based on these experiences, the Bank published in 2011 "Conserving the past as a foundation for the future: the China-Bank partnership on cultural heritage conservation" (PAD, paragraph 14, and ICR, paragraph 3). Lessons derived from these projects informed the project's design and supported the level of ambition in the PDOs.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To improve the quality of services available to rural households in selected villages of Huangshan municipality.

Rationale

Theory of Change (TOC): The scope of the following infrastructure inputs were adequate for attributing the resulting outputs. Construction and rehabilitation of certain infrastructure services, including training beneficiaries in operations and maintenance (O&M) are causally linked to the expansion and availability of these services to the targeted project beneficiaries. The specific infrastructure interventions followed a logical sequence that led to the improved services. Outputs were attributable to the project. However, the government preemptively self-financed some activities that required replacements (see revisions below) to maintain the same level of project ambition. The activities resulted in the outputs reported but the attribution of the outcome would need to consider the government's interventions to improve the target infrastructure services. In addition, the target outcome indicator was expressed only as a number of project beneficiaries, an output, and did not include how the improvements in services affected the lives and livelihoods of the beneficiaries. Aspects of these improvements were noted as anecdotes to support the reported outcome but were not represented as indicators to be monitored under the results framework supporting the TOC. To achieve the PDO, the TOC depended on the following assumptions: (i) investments reflected local needs; (ii) a low level of implementing capacity at project start would improve over time; (iii) villages would adopt



adequate operations and maintenance (O&M) measures to extend the life of the project assets; and (iv) services would be affordable. The PDO outcome indicator was an output and not expressed in terms of the impact of the outcome on beneficiaries health and incomes, or consumer satisfaction with the delivered services (see also Section 9, M&E Design below).

The 2016 restructuring added two new roads to replace those that the government self-financed and completed before the loan became effective and were dropped from the project. The target value of the original outcome indicator was reduced by 27 percent (from 145,357 to 127, 131 beneficiaries) even though the original target was exceeded. This reduction did not reduce the level of ambition of the PDO or the substance of the development outcome. Three outcome indicators were added: the number of women beneficiaries, and two indicators quantified the targets for the added activities. According to the Task Team's April 12, 2021 email to IEG, these revisions took into account changes in the population of the participating villages.

The 2019 restructuring added 11 new rural infrastructure sub-projects to use loan savings from unallocated funds, exchange rate gains, and lower costs from competitive biddings. According to the Task Team, target values of the output and outcome indicators were revised to recognize changes in population of the target villages. The changes under both restructurings increased the level of ambition of the PDO.

OUTPUTS:

The following indicators were dropped at the 2016 restructuring and replaced by new indicators assessed below under the 2016 restructuring:

- Project village beneficiaries with access to improved sanitation (baseline 9,700 original target 29,510). Two new indicators replaced this indicator.
- Project village beneficiaries with access to improved water sources (baseline 94,670 original target 123,200). The length of water supply pipeline replaced this indicator.
- Construction for flood protection (original target 843,506 m²). Indicators measuring outputs of water supply and wastewater treatment replaced this indicator.

The following targets in infrastructure services were exceeded:

- Constructed 426 km (original target 308.6 km, revised in the 2016 restructuring to 309 km, and further revised in the 2019 restructuring to 370 km) of new or improved roads; 256 km (original target 219 km, revised in the 2019 restructuring to 241 km) of new water supply pipeline, and 4,198 hectares (original target 4,065 hectares, revised in the 2019 restructuring to 4,151 hectares) with access to improved irrigation, flood control and drainage services.
- Trained the following beneficiaries: 2,110 person-months (target 1,500 person-months) of PMO and PMU staff; 95 units (target 68) of government departments in operation and maintenance (O&M) of infrastructure assets built under the project; 2,908 staff (target 2,600) from various departments; and 1,119 women (target 1,080) staff from various departments.

The infrastructure targets for two new output indicators added during the 2016 restructuring were exceeded or achieved:



- The following targeted outputs replaced the output indicators that were dropped in 2016: achieved 11,715 m³ (target 1,141,500 tons per year, revised in 2019 to 10,226 m³) in daily production of quality water supply; and increased daily capacity of wastewater treatment and disposal facilities to 1,921 m³ (target 322,500 tons per year, revised in 2019 restructuring to 1,663 m³). The project constructed low-cost, low-impact wastewater treatment and disposal facilities, collection networks, pit latrines with water flush toilets, and public toilets for tourists.

OUTCOMES:

- 145,788 project village beneficiaries (original target 145,357, revised in the 2016 restructuring to 127,131 and further revised in the 2019 restructuring to 145,400) had access to improved infrastructure services such as village roads, bridges, quays, drainage and sewage systems, water supply systems, streetlights, power, telecommunication facilities, riverbank protection, small dams, dredged rivers, ponds, and canals, wastewater treatment and disposal facilities, fitness squares, and other public spaces, garbage trucks, and garbage sorting equipment. The 2016 restructuring added the following outcomes: 71,609 women beneficiaries (original target 61,023, revised in the 2019 restructuring to 66,972) with access to improved infrastructure services;
- 136,566 (target 127,131) beneficiaries have access to wider, better quality, and all-season roads within 500 meters of their homes. With the construction of the roads, travel efficiency improved evident in shortened travel time by car between some villages - from 1-2 hours before the project, to 5-10 minutes (ICR, Annex 4). For example, the time it took for vehicles and bicycles to access villages from outside was reduced from 1-2 hours to 5-30 minutes (ICR, paragraph 33, and Annex 8 in pictures). The improved connectivity helped spur tourism and special agriculture in the project villages (see Outcomes below under Objective 2).
- The direct beneficiaries for water and sanitation services included. 35,622 (target 28,530, revised in the 2019 restructuring to 32,011) beneficiaries with access to improved water sources. With new access to tap water, women and the elderly heads of households (who substituted for young adults working in cities) benefited from reductions in time and effort for fetching water. This freed time for engaging in other economic activities (anecdote cited in ICR, Annex 7). There were 24,286 (target 19,450, revised in the 2019 restructuring to 21,000) beneficiaries have access to improved sanitation. Sewage was no longer discharged directly into water bodies, contributing to a healthier environment and protection of water resources (no figures provided, ICR, Annex 4). The living environment of rural residents were greatly improved (no indicators or targets). Coverage of centralized wastewater treatment increased from 11 percent before the project to 46 percent in 2019. 51 of the 68 villages were located upstream of Qiandao Lake, a water source for Eastern China, hence the improved sanitation was reported to have contributed to better water quality in the wider region (no data provided, ICR, paragraph 36). The drainage systems, river revetment, dredging of rivers and ponds increased the villages resilience to flooding, reduced riverbank erosion, riverbed siltation. The irrigation channels mitigated the impacts of floods and droughts and contributed to increasing agricultural harvests (incidence and value not provided, ICR, paragraph 37). Flood control facilities constructed under this project helped avoid about 10 days of flooding each year and reduced the economic losses by CNY 400 (US\$57) per mu or US\$ 851 per ha. (15 mu = 1 ha, ICR, footnote 8), No target provided (ICR, Annex 4, paragraph 6(a)).

In summary, the efficacy of the project to achieve this objective is rated substantial because the target outcome and most output indicators were exceeded. Two output indicators were dropped and replaced. All the target values of the outcome indicators and targets under the 2016 and the 2019 restructurings were



exceeded, contributing to this rating. The Results Framework indicators provided the evidence to support the achievement of improved quality of infrastructure services delivered to rural villagers, and to tourism and the agriculture sectors (linked to Objective 2 below). While no quantitative data was given in several of the indicators, the reported incremental outcomes were achieved and the project did make a contribution to improvements in infrastructure services. Since all the investments were completed, were fully operational, and were delivering benefits based on beneficiary feedback, the efficacy of the project to achieve this objective is substantial.

Rating

Substantial

OBJECTIVE 2

Objective

To improve income generating opportunities available to rural households in selected villages of Huangshan municipality.

Rationale

Theory of Change: The causal chain in the TOC was valid, wherein rural households would be given technical assistance to improve their agricultural production and create jobs in tourism services. These opportunities would increase incomes of rural households in the project areas. These tourism-related activities (namely, restoring historic buildings, constructing facilities, training residents in traditional arts, and supporting tourism associations) would conserve or reuse historic buildings, create exhibit halls, and establish standards in tourism services. Another set of inputs would increase agricultural productivity by improving irrigation, constructing production facilities and farms, and conducting studies and training activities. Plans and studies would assist villagers in conserving cultural heritage and promote rural tourism. Inputs led to completed production farms, increased irrigated land area, new market facilities, and trained farmers in new technologies. These outputs would lead to increase in incomes of rural households, under two streams - one from tourism services and tourist related arts and crafts produced by residents, and the other from increased value of agricultural products. The outcomes under the tourism related services would be reflected in income from performances held in facilities and sales from traditional arts and crafts produced by residents. The second stream of increase in rural households income would come from the value of agricultural production in the participating villages. The TOC assumed sufficient demand for agricultural and tourism products produced by the project. The interventions were logical and sequential. Outcomes were attributable to the project activities.

In the 2016 restructuring, low-priority projects such as adaptive re-use of idle historic buildings were dropped and the sub-grants for private homeowners were reduced due to low participation. Income generating activities targeted agricultural bases or farms dedicated to specific high value crops. This led to changes in the target values of output indicators. For example, the target area of production bases developed in project villages was reduced by 27 percent in 2016 as some initially planned activities were either financed by other sources or dropped due to difficulty in assembling land, as clarified by the Task Team. In addition, a new outcome indicator was added accompanied by a target value.

In the 2019 restructuring, target values were revised for both output and outcome indicators. One ancient building was added to be restored and two agricultural bases were added. In addition, since the "Beautiful



Village Master Plan" was now covered by another government program, this output was replaced by the socioeconomic impact evaluation and beneficiary feedback survey. The changes under both restructurings increased the level of ambition of the PDO.

OUTPUTS:

The following output targets for the cultural heritage conservation component were dropped during the 2016 restructuring:

- Number of village houses changed with Hui-style facades (original target 292). This was dropped because sub-grants intended to rehabilitate privately owned homes were cancelled due to lack of homeowner interest (ICR, paragraphs 66).
- Number of idle historic buildings adaptively reused (original target 96). This was dropped due to disagreement in 'adaptive reuse' and was replaced by the area of restored historic buildings below)
- Construction of Improved flood protection (original target 843,506 m2).(ICR, paragraph 23). The ICR and the 2016 Restructuring Paper did not provide the reason why this indicator was dropped. The Task Team clarified that this indicator was dropped because this aspect was captured in another indicator - land area with improved access to irrigation and flood control with improved irrigation and drainage services.

The following targets were exceeded:

- An audience of 54,284 (original target 24,000, revised in the 2016 restructuring to 54,000) persons attended exhibits and performances after restoring 58,062 (original target 46,788, revised in the 2016 restructuring to 41,560, and further revised in the 2019 restructuring to 57,935) m2 of historic buildings; constructed 301 (original target 175, revised in the 2016 restructuring to 215) tourist facilities; and developed an area of 684 (original target 825, revised in the 2016 restructuring to 602, further revised in the 2019 restructuring to 689) hectares of high value agricultural production bases.
- Trained the following beneficiaries: 1,409 (target 900) persons on traditional arts and techniques; 4,831 (target 4,600) farmers in new agriculture technologies; of whom 2,191 (target 2,180) were women; 2,401 (target 2,400) rural residents in tourism services; of whom 1,361 (target 1,350) were women; 2,908 (target 2,600) staff from line departments on cultural heritage conservation, tourism, and agriculture industries; of whom 1,119 (target 1,080) were women; 2,110 (target 1,500) of PMO and PMU staff trained in World Bank policies and procedures, and on effective use of project management systems and hardware; and 95 units (target 68).were trained in O&M and asset management.

OUTCOMES:

- **The 2016 restructuring** dropped this outcome indicator: the value of agricultural production in project villages (baseline CNY 72,167,000, original target CNY 88,633) replaced by the annual revenue which reached CNY 16 million (US\$2.3 million) from investments in agriculture production bases, and agriculture product trading markets. Farmers income increased (no figures provided, ICR, Annex 4). These special agricultural production bases were irrigated arable land in the target villages used to grow rice, traditional Chinese medicine, soybean, corn, aquatic products, tea, oilseed rape, flowers,



fruit trees, seedlings, Lei Bamboo and economic crops, such as tea trees, to get higher returns. The Task Team clarified that returns referred to earnings for the economic crops.

- **The 2019 restructuring** further increased the target values of three PDO indicators to account for additional activities funded by loan savings and other unallocated funds, from exchange rate gains and lower costs from competitive biddings (ICR, paragraph 16). There were 4,565 (original target 4,000, revised in the 2019 restructuring to 4,550) jobs created. Jobs in tourism and in agriculture, provided total salary incomes of more than CNY 30 million (US\$4.2 million) for local farmers (ICR, paragraph 41)
- 3,754,000 (original baseline 3,806,000, original target 10,013,000; the 2016 restructuring revised the baseline to 2,580,000 and the target to 3,610,000, further revised in the 2019 restructuring to 3,600,000) tourists visited project villages, which have implemented the cultural heritage conservation activities under the project. The baseline and target values were revised in 2016 to focus only on project villages that have implemented the cultural heritage conservation making these new values "original" baseline and target, according to the Task Team. The former baseline was more than the actual achieved, which necessitated the revised definition of the indicator.

In sum, the efficacy of the project to achieve this objective is rated substantial because the original outcome indicators were revised without changing the level of ambition of the objective and all outcome indicator targets were exceeded.

Rating

Substantial

OVERALL EFFICACY

Rationale

The overall efficacy of the project to achieve the two objectives is rated Substantial because the targets for all the revised outcome indicators were exceeded. According to a 2019 survey of 79 of 356 (22 percent), new small and micro enterprises that received support from the project, 99 percent of businesses were 'very satisfied' or 'satisfied' with the project, especially with aspects of improved infrastructure and the overall business environment (ICR, paragraph 40). The substantial outcomes of the project activities to achieve the PDOs included the impact from the interventions that the government self financed. Such government financed activities complemented the project inputs, resulted in replacement activities to maintain the original level of ambition of the PDOs. While the project outcomes cannot be fully attributed solely to the project, the overall efficacy is rated substantial.

Overall Efficacy Rating

Substantial



5. Efficiency

Economic and Financial Efficiency: At appraisal, the Bank appraisal team analyzed the economic efficiency of project investments under the first three components - infrastructure improvement, cultural heritage conservation, and job creation. Benefits came from: (i) reduced travel times and vehicle operating costs on roads; (ii) increased agricultural production due to flood protection, irrigation, and improved production technologies; (iii) increased agricultural value from improved access to agricultural land; (iv) increased value of agricultural products due to improved technologies and certification; (v) reduced losses in product processing and marketing, although the Task Team clarified these values were not monitored during implementation but determined at closing; (vi) increase in number of tourists and in output of sale of goods and services in the tourism sector. A large number, small scale, and diverse types of investments scattered throughout the 68 project villages led to different approaches in calculating efficiency: cost-effectiveness for infrastructure services; and cost-benefit for flood control, irrigation, tourism, and special agriculture (IPAD, paragraph 54). Infrastructure investments were determined to be cost effective and the other activities provided economic internal rates of returns (EIRRs) of 27 percent for flood control, 18 percent for irrigation, 24 percent for special agricultural industry, and 33 percent for cultural heritage activities (PAD, paragraph 56).

At appraisal, financial efficiency analysis was not conducted (ICR, paragraph 49) but fiscal analyses determined the impact of the project on the financial positions of the participating counties and districts. Counterpart requirements were less than 0.5 percent of budget revenues of most counties. Loan repayments were less than 0.1 percent of their annual budget expenditures. Counterpart funding and repayment requirements were within the capacities of the target counties and districts. (PAD, paragraph 57).

At closing, calculating economic efficiency replicated the methodology at appraisal (ICR Annex 4, paragraph 3). Infrastructure investments in roads, water supply, wastewater collection and treatment, were found to be cost effective. Using a 12 percent discount rate, justified as the social discount rate (ICR, Annex 4, paragraph 5), the EIRRs of the project investments at closing were comparable to those determined at appraisal and estimated to be 22 percent in flood control, 16 percent in irrigation, 24-31 percent in the special agricultural investments, and 27 percent in tourism (ICR, Annex 4). There was no comparable EIRR at closing for cultural heritage activities.

At closing, the revenue generating activities of water supply and wastewater treatment services represented 9 percent of the total project cost. Fees collected for the use of water treatment plants were found to be adequate to cover O&M needs. Villages benefiting from the wastewater treatment facilities collectively paid for the O&M of these facilities. Districts and county governments provided subsidies. Fees for water consumed about 0.5 percent of the average household income (ICR, paragraph 49). The Task Team clarified that no affordability analysis was conducted at closing due to lack of information.

Administrative and Operational Efficiency: The project experienced delays in the initial three years because of the inexperience of the implementing entities with Bank policies. Some project management units lacked technical staff. Some experienced delays in mobilizing technical support. Some experienced frequent staff turnover. Cumbersome government procedures for approving cultural heritage conservation design or acquiring lands for national parks that took longer than anticipated contributed to the delay (ICR, paragraph 62). These challenges were addressed by targeted capacity building and restructuring. The project was extended by 12 months to complete activities delayed by inclement weather and activities added because of cost savings or to replace cancelled ones - either to avoid replicating activities originally planned under the project but which the government decided to finance themselves even before the project was made effective, or low participant interest in planned activities. Before the 2016 restructuring, accumulated local government debt by



some participating counties and contraction of the Chinese economy led to difficulties in obtaining counterpart funds for civil works and delayed payments to contractors.

In summary, the project's closing date was extended by one year due to initial implementation delay, issues associated with obtaining counterpart funds in a timely manner, activities added to replace those that were cancelled or dropped, and inclement weather. This drawback did not detract from the economic efficiency achieved by the project. Efficiency is rated Substantial.

* For comparative purposes, the data used below refer to the EIRR of the flood control sub-projects. However, the project ERRs were derived from investments in irrigation, agriculture, and tourism activities financed under 3 of the four components.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	27.00	0 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	22.00	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of objectives is rated High. The efficacy of the project to achieve both objectives, after restructuring and the additional activities, is rated Substantial. Efficiency is rated Substantial because of substantial economic efficiencies established for the project investments. The outcome of the project is therefore rated Satisfactory.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

The following conditions pose risks to the development outcome:



- **Exposure to natural hazards and climate change:** Most participating villages were located in mountainous areas and were at risk of landslides and periodic flooding. The engineering design of project investments considered these hazards. Investments in drainage, landslide protection, flood control, and soil conservation were undertaken to increase the resilience of project villages. Investments in sanitation improvement and development of organic agriculture also reduced pollution to address the impact from climate change.
- **Lack of financial and technical capacity to meet O&M needs of project assets.** Many villages experienced substantial increases in revenues from land lease, agriculture production, tourism, and other public assets to cover the initial O&M needs of these assets. However, some villages may not have the fiscal and technical capacity to sustain O&M for these assets. In 2019, a survey of 30 villages found that two villages did not have a reliable income while the other 28 had a stable and reliable source of income. They had sufficient resources to cover O&M for a few centralized waste water treatment facilities (WWTFs) that require a higher level of technical know-how in O&M and those infrastructure assets that are not supported by user fees. Villages would need to raise O&M funds, through user fees for irrigation facilities, for example. The project supported agriculture and tourism associations and trained their members and were expected to promote support for O&M of assets. However, they may require continuing policy support after the project.
- **Wavering commitment to project asset management.** Proper institutional arrangement and funding commitment to asset management were impressed upon local authorities throughout the project cycle. At appraisal, technical assistance led to developing management manuals for different types of assets. Available technical experts and O&M costs were noted in investment designs for particular investments in wastewater treatment/disposal technologies or restoring historic buildings, for example. As the project was closing, local authorities developed asset management plans pledging organizational, personnel, and O&M financing for the different types of public assets matched by the capacity and resources at the village level. Continuing assistance from higher level agencies would address these village level needs..
- **Lack of sustainable support for skills training introduced to rural residents.** Local governments supported the skills training of villagers in traditional arts, new agriculture technologies, and tourism services. However, local governments have not committed to support continuing skills training to sustain the socioeconomic impacts of the project.

8. Assessment of Bank Performance

a. Quality-at-Entry

The World Bank team designed the project aided by operational and technical experts in Chinese rural development, recognizing the need of 68 villages to improve its economy and create jobs.

Design included lessons from similar projects in China such as (i) participatory sub-project selection; (ii) cost effective design of facilities; and (iii) training local communities on adequate operations and maintenance (O&M) arrangements (PAD, paragraphs 29-32). The project also applied lessons from "Conserving the Past as a Foundation for the Future: China- World Bank Partnership on Cultural Heritage Conservation" study by using heritage conservation and tourism as platforms for economic development; integrating cultural heritage conservation with infrastructure rehabilitation; adopting conservation best practices; and allowing for the repurposing of idle cultural heritage assets (PAD, paragraph 33). The team conducted social impact assessments and assessed sustainability and



O&M arrangements of water utilities to inform technical designs, O&M plans, and social safeguards. Risks and mitigating measures were adequately identified such as training local counterparts who were unfamiliar with Bank processes; and budgets in place for O&M to assure of availability of counterpart funds (PAD, Annex 4, page 54). Shortcomings at entry were borne out at implementation. Among these were the availability of local counterpart funds for infrastructure contracts; maintaining the priority accorded identified sub-projects, time required to secure qualified firms for specialized technical designs and construction, and some planned activities that the government self-financed and had to be replaced at restructuring to maintain the level of ambition of the PDOs. Sub-grants initially planned to were designed to rehabilitate privately owned houses were reduced and eventually cancelled due to low participation (ICR, paragraph 20). This cancellation highlighted the over optimistic design in achieving cultural heritage conservation. There were also poorly defined indicators or over optimistic target values of outcome and intermediate outcome indicators (ICR, paragraph 16). These were addressed at implementation by the two restructurings (see Quality of Supervision below). Some components were later cancelled because the government implemented those outside of the project or there was a lack of interest from project participants as in the case of the grants for cultural heritage conservation.

In summary, while there were minor shortcomings in the indicators used during project design (see Section 9, M&E Design), the quality at entry overall is rated satisfactory.

Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

The World Bank team conducted 13 regular supervision missions and numerous short technical missions over the 7-year implementation period. Task team leaders changed twice supported by a co-task team leader. Most team members in Beijing had daily contact with the PMO and PMUs. The 2017 Mid Term Review (MTR) included World Bank team of technical experts including rural development experts to support the PMO and the PMUs. Fiduciary, environmental, and social safeguards specialists carried out just-in-time technical missions and worked with the PMUs to implement corrective measures. Hands-on training and experience-sharing workshops were held to strengthen the operational capacities of the implementing entities (ICR, paragraph 78). The first restructuring addressed the shortcomings in some indicators that did not measure the expected outcomes. The sub-grants for renovating home facades did not generate demand and was cancelled. Restructuring also addressed issues related to technical designs, institutional capacity, and availability of counterpart funding that caused initial delays in implementation (ICR, paragraphs 79 and 81).

In sum, the quality of Bank supervision is rated Satisfactory.

On the basis of these two Satisfactory sub-ratings, the overall quality of Bank performance is rated Satisfactory.



Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The M&E system included a Management Information System (MIS). An impact survey would be conducted using a sample of project activities to quantify benefits of project investments and would be conducted in three segments (PAD, paragraph 42). First to establish a baseline, second, prior to the Mid Term Review, and third at project closing (PAD, paragraph 44). The original indicators measured improved services and income generating opportunities (PAD, paragraph 41). Baselines, and targets were to be revised during implementation (see below) to reflect the additional sub-projects added during the project restructurings. The first objective was vaguely worded without specifying the improved services although the supporting intermediate outcome indicators in the project's results framework were evident at appraisal (PAD, Annex 1). The second objective was clear, indicating a two-pronged approach to increasing rural incomes - from agriculture and tourism services. The Theory of Change provided a logical sequence of how the activities led to outputs and outcomes under the infrastructure services and jobs created. These were evident in the indicators used in the results framework. Three outcome indicators supported by 17 intermediate outcome indicators or outputs did not fully cover all outcomes under the project. However, not all outcomes could be attributed only to the project since the government self-financed activities that also contributed to project outcomes. In addition, there were no specific indicators to reflect the impact of the improvement in infrastructure services to lives and livelihoods of project beneficiaries (see Section 4, Efficacy above). Anecdotes were used as evidence to strengthen project outcomes. The M&E responsibilities and arrangements were embedded in local institutions.

b. M&E Implementation

The Project Management Office of the Huangshan Municipality implemented the M&E system. A dedicated M&E officer at the PMO and PMUs monitored progress against the indicators. M&E consultants were mobilized to support the PMO and PMUs to conduct surveys and monitor progress. The consultants set up research groups in each of the project districts/counties to conduct onsite investigation, surveys, and interviews as planned. Due to weaknesses in the indicators at M&E design, the two restructurings redefined, dropped, or replaced baselines and target values of outcome indicators to reflect cancelled and replacement or added activities. In addition, target values of some indicators were overestimated at appraisal. The Task Team also clarified baselines and target values of indicators reflected the latest village population statistics. Gender-disaggregated targets were added in the 2016 restructuring.

c. M&E Utilization



The monthly M&E reports assessed progress in each village, ranked performance, and identified issues to be addressed. Semiannual reports supplemented these reports to track counterpart fund allocations, delays in site clearance, and contract management issues. These reports informed two restructurings. (ICR, paragraph 68) and informed the Mid Term Review. A comprehensive socioeconomic impact study and beneficiary survey commissioned by the PMO and completed in 2018 provided a meaningful assessment of project outcomes.

In summary, the overall quality of M&E is rated Substantial. The design was comprehensive. Implementation supervision addressed weaknesses of original indicators. Utilization led to informing issues and corrective measures to be adopted.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

Environmental Safeguards. The project was assigned an environmental category "B" and triggered five safeguards: Environmental Assessment (OP/BP 4.01); Natural Habitats (OP/BP 4.04); Pest Management(OP/BP 4.09); Physical Cultural Resources (OP/BP 4.11); and Safety of Dams (OP/BP 4.37). The project complied with the environmental safeguards policies (ICR, paragraph 71). Environmental Codes of Practices (ECOP) were addressed anticipated adverse construction related impacts, which were site specific and reversible. Mitigation measures were included in the design of the small-scale investments to renovate or improve existing facilities across seven districts and counties in Huangshan Municipality. In the approved Environmental Management Plan (EMP). some activities In four villages (Fuxi, Shuxi, Xiong, and Yanjuiao), were designed in natural habitats. The Environmental Assessment (EA) confirmed that renovation of existing infrastructure would not cause significant adverse impacts to protected areas. A Pest Management Plan was prepared because sub-projects may involve crop diversification and may involve pest management. A Physical Cultural Resources (PCR) Management Plan was included in the EMP, specifying conservation measures, monitoring, capacity building, institutional arrangements, and budget for sub-projects that involve conservation of old buildings, some old trees, and two old bridges in two villages. Dam safety and emergency preparedness plans were prepared for the two existing dams - Qiyaunshan Dam in Xiuning County and Qiaokengwu Dam in Shexian County - and weirs to be rehabilitated. The Project Operations Manual included a Dam Safety Action Plan.

Social Safeguards: A Resettlement Policy Framework (RPF) and Action Plan (RAP) were prepared and disclosed. The project complied with social safeguards policies (ICR, paragraph 72). Land acquisitions were minimized. Housing demolitions were avoided. Village based sub-projects avoided and minimized involuntary resettlement activity. Land ownership was not to be converted. Chinese land law and administrative management of village infrastructure called for sub-projects to be owned by the villages. Municipal districts and counties would pay any resettlement cost to the affected farmers to reduce village financial difficulties. Each country, district, and village committees established Grievance Redress Mechanisms. No complaints about land acquisition and resettlement were reported (ICR, paragraph 73). An independent social monitor reported that resettlement activities were consistent with the RPF and RAPs, and that legal land entitlements were strictly followed. An end-of-project social survey verified the total



cumulative number of permanent and temporary land physical displacement/relocation, as well as the number of economic displacements. The project did not incur any permanent physical resettlement relocation. According to the 2004 Chinese Land Law, village committees acquire farmers' land if used for village public interests. 22 hectares of contracted land were terminated and used for village facilities. Farmers received compensation (ICR, footnote 26). 546 families with 1,914 people were affected. All affected farmers were fully compensated. The temporary land used during construction was 1.26 hectares (or 18.95 mu), and involved 39 households (130 people) that caused seasonal economic losses. The land was later returned to the farmers.

b. Fiduciary Compliance

Financial Management. According to the ICR, the project complied with World Bank financial management policies and procedures with accounting and internal control systems in place. Consolidated interim unaudited financial and project audit reports were submitted to the World Bank on time. The audit reports had unqualified (clean) opinions (ICR, paragraph 75)

Procurement. According to the ICR, most transactions of the project complied with World Bank procurement policies and procedures (ICR, paragraph 74). Seven county/district PMUs and the municipal PMO conducted procurement with varying consistency. In some cases, some were unaware of the relevant World Bank policies and adopted local practices instead resulting in noncompliance. The PMO and PMUs took corrective measures as guided by the World Bank.

c. Unintended impacts (Positive or Negative)

d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Satisfactory	
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons



The operation offered five lessons that may benefit task teams in designing future similar operations. Four of these have been taken from the ICR with slightly modified language (ICR, paragraphs 86-90)

- **A cost-effective combination of ‘hard’ investment (infrastructure) and ‘soft’ interventions (skill building, promotional activities) could improve services and create rural jobs.** Investments in roads, water systems, and wastewater facilities, were accompanied by "soft" interventions to strengthen O&M capacity for these built assets. Improved irrigation was accompanied by training in agricultural practices. Beneficiaries had improved access to markets and economic opportunities, and gained O&M know-how to extend the life of the project-assisted assets. Skills fostered entrepreneurship to improve the rural economy and help sustain the village environment.
- **Integrating human capital development with cultural heritage tourism could help sustain new economic ventures.** Human capital and institutional capacity were simultaneously developed while infrastructure investments preserved cultural heritage. The strategy combined skill building in tourism services while developing or preserving cultural heritage assets and promoted the adoption of modern agriculture technologies to generate new business ventures. The communities improved their living conditions, thus contributing to the social, economic, and environmental sustainability of the villages. In 2018, the government adopted this integrated approach in its Rural Revitalization Strategy for local governments' rural development programs.
- **Creating a basket of eligible investments may allow rapid replacement of dropped investments when priorities change.** More projects than were budgeted were included in the feasibility studies and appraised at preparation that participating villages identified. As a result, when unforeseen circumstances such as loan savings or change in investment priorities or investments that were eventually self-funded, replacement activities were readily available for implementation.
- **Balancing between demonstrating impact and expanding geographic coverage may be useful to consider.** Sixty eight villages (out of 165, ICR, footnote 1) covering a wide geographic spread provided the municipal government with a critical mass to showcase how combining improvements in "hard" infrastructure services could be combined with "soft" capacity enhancements to bring about income generating opportunities. Numerous factors were involved in selecting participation by villages and determining eligible infrastructure investments and capacity interventions to ensure successful project outcome. Future similar projects that may involve numerous small-scale investments over a wider area may benefit from using results-based factors to balance site selection and choice of investments.

13. Assessment Recommended?

Yes

Please Explain

The Task Team clarified that this project demonstrated new, multi-sectoral approaches to rural development that integrated infrastructure upgrading, cultural heritage conservation, and skills training to generate economic opportunities in agriculture and rural tourism, This experience added to the World Bank's involvement in



China's new countryside, small town, urban-rural development agenda and conservation projects evident in the following projects:

- Gansu Cultural and Natural Heritage Protection and Development project (2008)
- Guizhou Cultural and Natural Heritage Protection and Development project (2009)
- Shandong Confucius and Mencius Cultural Heritage Protection and Development project (2011)
- Ningbo New Countryside Development project (2016)
- Sichuan Small Towns Development project (2016)
- Jiangxi Poyang Lake Small Town project (2019)
- Chongqing Urban and Rural Integration project (2010)
- China Integrated Economic Development of Small Towns project (2018)

In addition, the World Bank has published "Conserving the past as a foundation for the future: the China-Bank partnership on cultural heritage conservation" (2011) laying out lessons for future interventions in this sector. With such experience, task teams may benefit from consolidating lessons in designing future urban development projects that aim to achieve equity in opportunity, income, and services between the urban and rural sectors in China, including pitfalls to avoid.

14. Comments on Quality of ICR

The ICR followed the OPCS guidelines albeit a little on the lengthy side. The report was well written and candid. For example, the two sources of the difference in the reported jobs created under the second objective - one from the M&E reporting, and the other from the socio-economic study conducted at closing were acknowledged (ICR, footnote 12). The report was clear and provided relevant information and useful analysis. Specifying the efficiencies achieved by the project was helpful (Annex 4). The quality of the analysis justified the ratings, although with a minor disagreement with the efficacy of the project to achieve its second objective using the original indicators. The report was evidence-based and results-oriented with numerous cross references providing consistency and strengthened arguments for the ratings. The report was internally consistent, as was evident in the justification behind the indicators that have been dropped or replaced and summarizing these actions in Annex 1(c). The annex on results (Annex 7) captured additional impact from the income-generating activities. Lessons were based on the implementation experience from the operation, particularly the utility of the MIS introduced in this project that the government indicated would be adopted for future use.

a. Quality of ICR Rating Substantial

