



European Investment Bank (EIB)

Luxembourg, 5 December 2022

Environmental and Social Completion Sheet (ESCS)

Overview

Project Name:	SHANXI YELLOW RIVER BASIN FORESTS
Project Number:	2014-0642
Country:	China
Project Description:	The project establishes 19 140 hectares of new forests on environmentally vulnerable erosion-prone slopes and abandoned agricultural lands in the watershed area of the Yellow River in Shanxi Province. The project is an allocation under the China Climate Change Framework Loan (2006-0086).

Summary of Environmental and Social Assessment at Completion

EIB notes the following Environmental and Social performance and key outcomes at Project Completion.

The project supported the afforestation of 19 514 hectares in Shanxi Province, involving 39 townships and 294 villages, which is an overachievement of 374 hectares (or almost 2%). The share of the protection and economic forest newly afforested was 80.8% and 19.2% respectively. Altogether 12 different tree species, all native to the region, were planted, thereby enhancing the biodiversity. The survival rate was over 90%.

The project generated significant environmental benefits, including reduced soil erosion in particularly vulnerable areas and improved management of the important Yellow River catchment area, helping to address flood risk and siltation.

The project contributed to both climate mitigation and adaptation: the new, well-planned forests increased carbon sequestration through biological growth (average 128 000 tCO₂ annually over the next 25 years), and reduced exposure to climate-related risks such as soil erosion and flash floods associated with climate-related weather extremes.

The soil erosion risk during afforestation works was mitigated by planting indigenous trees and matching them with site requirements. Strict technical requirements and prescribed silvicultural methods based on scientific forestry were followed. During site preparation, only planting holes were irrigated, and native trees, shrubs or herbs were preserved to effectively retain their protective function. Slash burning was strictly prohibited during site preparation to avoid soil erosion.

Sustainable forest management practices and forest certification was piloted, employing the Chinese Forest Certification System (CFCS), accredited under the international Programme for the Endorsement of Forest Certification (PEFC). The promoter implemented an accepted forest certification road map. The pilot certification area was 5 544 hectares, including 1 046 hectares of walnut, 1 000 hectares of white bark pine in Lingshi, 1 702 hectares of oriental arborvitae in Hequ, and 1 795 hectares of Chinese pine in Fenyang.



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The project introduced better data management systems and project monitoring practices for sustainable forest management. With the help of the database operating system, the goal of integrating the county (city) forestry project maps with the provincial forestry information system and information sharing was realized. Notable achievements were made in institutional capacity building, improvement of the management skills, and more scientific technologies. The project delivered on its training target. By the end of June 2020, 750 persons have received provincial training, 7 179 persons have consulted with experts on county-level investigation and training, and 3 150 persons have completed technology promotion days.

In addition to the improved living environment, socio-economic benefits included employment opportunities, income from land leases and income generation from planting economic timber trees, non-timber forest products (fruits, medicinal plants) and seedling production. 8 954 person years of employment were generated during the construction period. According to the promoter, after five years of project implementation the economic output value of some plantation models, e.g. walnut (*Juglans regia*) and Chinese honey locust (*Gleditsia sinensis*) have already reached RMB 45,000/ha per annum. The per capita income of project beneficiaries is projected to increase by RMB 800 - 1 000. The promoter reported that in villages where most men migrate to urban areas for work, women and elderly people took over project implementation tasks. The employment opportunities were particularly important for households led by women and elderly persons who mitigated labour shortages.

The Social Impact Assessment (SIA) identified potential conflicts related to land leasing contracts and appropriate indexing of annual rents as main social risk. All the land allocated for project implementation was owned by farmers and village collectives. No land transfer occurred due to the project. The rural land contractual management rights were confirmed, registered and certified. According to the SIA, the satisfaction rate of the local farmers was over 90%. All project benefits accrued to farmers and village collectives, which guaranteed their buy-in.

One undertaking was that project contracts should follow the agreed model, be signed with the final beneficiaries before starting the site preparations and be verifiable afterwards. The promoter has provided examples of afforestation contracts signed by village collectives and County Project Management Offices (CPMO). By the end of the project, the six counties (cities) involved have totally signed 554 afforestation contracts. The contracts awarded have not been subject to complaints, cancellations, contract changes, fines, and any outstanding issues and outstanding claims, according to the promoter.

The technical capacity of the promoter and quality of the implemented works was deemed overall good and in compliance with EIB standards and requirements. The E&S conditions and undertakings noted by PJ in the ESDS have been met. The Shanxi Environmental Protection Department approved the Environmental Impact Report (EIA) for the project on 6 September 2015. No specific EIB involvement regarding E&S matter was required during implementation, apart from routine monitoring.

There were altogether three undertakings in the ESDS, related to the use of chemicals, Environmental Management Plan (EMP), and forest certification roadmap. The Promoter provided a forest certification roadmap, satisfactory to the Bank. Minor deviations were corrected during monitoring. For example, 8 of the 28 pesticides initially listed by the promoter were not approved for use by the EU and had to be deleted from the list. No pesticides were



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applied during project implementation. Besides, some of the planted areas were located in confined areas within compartments exceeding the maximum slope prescribed in the EMP, posing a potential health risk for not properly trained and equipped workers. Workers received trainings and had to follow safety protocols. For practical reasons, the average slope per compartment is usually recorded in the database which means that not all steep areas within the compartment can be easily identified and removed from the treated area. Besides, from an environmental viewpoint, steep areas need to be treated as they are particularly susceptible to erosion risks and landslides.

EIB notes the following key Environmental and Social aspects to be monitored during operations:

- The borrower shall deliver to the Bank a project report three years after project completion (PCR+3), i.e. in September 2023. It shall cover the afforested area by forest category, survival rate and viability of forest plantations, forest growth, carbon sequestered, employment effects, revenues and expenses, risks, legal actions, etc.
- The borrower shall provide evidence that all project funds have been disbursed to final beneficiaries after successful inspection three years after project completion (PCR+3), i.e. in September 2023, by submitting a final "Loans and Supporting Funds Arrangement and Expenditure Table" and supplementary documents.

Summary opinion of Environmental and Social aspects at completion:

EIB is of the opinion based on reports from the promoter, site visits and monitoring reports by EIB's forestry consultant in China, that the Project has been implemented in line with EIB Environmental and Social Standards, applicable at the time of appraisal.