@#&OPS~Doctype~OPS^blank@pidaprcoverpage#doctemplate

Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 11-Feb-2025 | Report No: PIDA0283

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
China	EAST ASIA AND PACIFIC	P177450	Sustainable Ecosystem Restoration and Biodiversity Conservation Project
Financing Instrument	**Estimated Appraisal Date**	**Estimated Approval Date**	**Practice Area (Lead)**
Investment Project Financing (IPF)	30-Jan-2025	25-Mar-2025	Environment, Natural Resources & the Blue Economy
Borrower(s)	**Implementing Agency**		
People's Republic of China	Shanxi Provincial Forest and Grassland Administration		

Proposed Development Objective(s)

The Project Development Objective is to restore priority habitats and enhance in-situ and ex-situ conservation for priority species in targeted areas of Shanxi Province.

Components

Component 1: Investments in Ecosystem Restoration and Species Conservation
Component 2: Strengthening Knowledge and Institutional Capacities for Biodiversity Conservation
Component 3: Project Management

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	No
Is this project Private Capital Enabling (PCE)?	No

SUMMARY

Total Operation Cost	**142.22**
Total Financing	**142.22**

of which IBRD/IDA	**100.00**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	100.00

Non-World Bank Group Financing

Counterpart Funding	42.22
Borrower/Recipient	42.22

Environmental And Social Risk Classification

High

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

The Regional Operations Committee authorized appraisal of the proposed project.

B. Introduction and Context

Country Context

1. China hosts exceptional biodiversity, and its effective conservation is a global public good. With an area of more than 9.5 million km^2, China hosts a wide range of ecosystems ranging from tropical to boreal forests, from deserts to inland and marine waters, making it one of the world's 17 mega-diverse countries. These ecosystems harbor over 34,687 known species of animals and plants, making China the third-most biodiverse country in the world.[1] Many of China's wild species are endemic, meaning that they are found nowhere else in the world. China also contains parts of four of the world's 36 global biodiversity hotspots – places that have large numbers of endemic species and are also under threat.

2. The conservation and sustainable management of biodiversity is a global priority. The World Economic Forum now ranks biodiversity loss as one of the top-five risks to the global economy.[2] In December 2022, China led the adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) under the Convention on Biological Diversity,[3] which aims to ensure that by 2030 at least 30 percent of terrestrial, inland water, and coastal and marine areas are effectively

[1] International Union for the Conservation of Nature (IUCN). China. Available at: https://iucn.org/our-work/region/asia/countries/china
[2] Waldron et al. 2020. Protecting 30 percent of the planet for nature: costs, benefits and economic implications. Cambridge. UK.
[3] Conservation on Biological Diversity. 2022. Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity 15/4.

conserved and managed, using Protected Areas (PAs) and Other Effective Area-Based Conservation Measures (OECMs). The World Bank's Global Challenge on Forests for Development, Climate and Biodiversity recognizes the critical role that biodiversity plays for local, regional and global development outcomes, and the urgency in demonstrating effective and scalable approaches to protecting and sustainably harnessing nature.

3. Implementing and gaining knowledge from effective biodiversity conservation in China holds significant global relevance. China's ecosystems provide essential services such as carbon sequestration, water purification, and soil fertility, which are crucial for agricultural productivity. A loss of biodiversity could undermine these services, negatively impacting food security and agricultural commodity prices worldwide.[4] Furthermore, biodiversity and ecosystems in China face threats that mirror those encountered by other countries. China has been a leader in developing large-scale policies and programs that have been a reference point for ecological restoration worldwide, such as the Grain to Green Program and Natural Forest Protection Program. By developing and implementing effective biodiversity conservation strategies and models at scale, Chinese knowledge and experiences can also inform other nations striving to meet the GBF targets.

Sectoral and Institutional Context

4. China's rapid growth over the last four decades has led to impressive poverty reduction but has also been accompanied by significant environmental costs. Between 2004 and 2017, the annual cost of environmental degradation in China increased from US$70.2 billion to US$259.9 billion, accounting for 2-3 percent of the country's GDP.[5] Recognizing these challenges, China has made a strong commitment to transition toward a more balanced and sustainable growth model focused on sustainable resource management, environmental protection, and ecological conservation. The concept of 'Ecological Civilization' was enshrined in China's constitution in 2018 as a political, cultural, and socioeconomic framework for the country's environmental and development policies, laws, and institutions, pointing to a pathway toward harmony between humans and nature.[6] China's 14th Five-Year Plan (FYP) (2021–2025) focuses on improved resource utilization, pollution abatement, as well as on the restoration of ecosystems and conservation of biodiversity.

5. China is becoming a leader in global biodiversity conservation. According to the IUCN, China has established over 11,800 PAs covering about 18 percent of the country's land and 4.1 percent of its marine area.[7] Efforts have also been made to strengthen ex-situ conservation. For example, China has established 234 botanical gardens and arboreta, conserving over 20,000 species of higher plants. As a result of these efforts, at least 10 of China's notable endangered species are on the path to recovery, including the giant panda, Asian crested ibis and Elliot's pheasant. In 2019, China officially launched the National Park (NP) system pilot program which aims at gradually streamlining and consolidating the existing system of PAs across larger priority landscapes in accordance with a spatial layout plan that identified 49 priority NPs.[8] With its renewed commitment to protect and conserve a minimum of 30 percent of land and sea by 2030 under the GBF, China will need to significantly expand the area under PAs and OECMs. In 2024, China issued an updated Biodiversity Conservation Strategy and Action Plan (BCSAP) (2023-2030), aligning with the GBF.

6. To meet its global biodiversity targets, China will have to scale-up its conservation efforts, including outside of formally established PAs. Key ecosystems offer the opportunity to generate large biodiversity benefits while mitigating short to longer term risks of further biodiversity loss. In 2010, China had 108 million hectares of natural forest extending

[4] Food and Agriculture Organization of the United Nations (FAO). 2022. How the world's food security depends on biodiversity.
[5] Ma et al. 2020. The Valuation of China's Environmental Degradation from 2004 to 2017. Environmental Science and Ecotechnology 1: 100016.
[6] Hansen et al. 2018. Ecological Civilization: Interpreting the Chinese Past, Projecting the Global Future. Global Environmental Change 23: 195–203.
[7] China's PA system includes three categories based on their ecological value and level of protection: (i) National Parks, featuring nationally important ecosystems and consolidating existing PAs in the same landscape; (ii) Nature Reserves, featuring regionally representative species, habitats, and ecosystems; and (iii) Natural Parks, featuring ecosystems and monuments with important ecological, scenic, and cultural characteristics.
[8] Guidance for the Development of the Protected Areas System with National Parks as the cornerstone (2019). State Council of the PRC.

over 16 percent of its land area, but 232,000 were lost by 2023 due to land use change for urban expansion and agriculture development.[9] Species diversity, which underpins the functioning and resilience of ecosystems, is also threatened. According to the latest China Red List assessment,[10] about 21.4 percent of China's vertebrates, 51 percent of gymnosperm plants, and 41.3 percent of amphibian species are threatened.[11] Studies have shown that about 10 percent of China's PAs are highly vulnerable due to habitat loss and climate change.[12] In particular, infrastructure development and human interventions, including monoculture plantations that have contributed to expanding the country's forest lands, have led to habitat fragmentation and interfered with ecosystem processes such as species dispersal and hydrological cycles. Climate change is an additional stressor leading to greater extinction risks and higher uncertainties, particularly when aggravated by human disturbance.[13] Rising temperatures and changing precipitation patterns have led to more frequent and severe droughts, floods, and storms, which has been devastating habitats and biodiversity. With a population over 1.4 billion and increasing economic activity, to continue preserving its rich biodiversity, China will need to innovate its approach to biodiversity protection including through the establishment of ecological corridors[14] that connect PAs across larger landscapes to provide habitat for the conservation of viable populations of key species.

7. Effective biodiversity conservation will also require strengthening the institutional capacities of local authorities who are responsible for natural resource management. In 2018, China established a new Ministry of Natural Resources (MNR) in charge of overall planning and overseeing the development and protection of the country's natural resources. A vice-ministerial level administration, the National Forestry and Grassland Administration (NFGA) was formed under the MNR to oversee the conservation and management of China's ecosystems. The Provincial and County branches of the NFGA are responsible for the management of forest, grassland and wetland resources both within and outside PAs within their jurisdictions, including the design, establishment, and future management of NPs under the guidance of central authorities. Going forward, effective biodiversity conservation will require strengthening the technical capacities and knowledge base of these local biodiversity practitioners for adapting forest and other natural resource management practices for effectively conserving, restoring and connecting ecosystems and habitats for threatened species. To achieve this, enhanced knowledge of species' distributions, habitat requirements and movement patterns, as well as understanding and addressing key threats through biodiversity inventory, monitoring and assessment is key. Technical standards for ecosystem restoration need to be improved to incorporate biodiversity habitat conservation in forest management, especially for ecological connectivity. Lastly, engaging with local communities and increasing public awareness on the benefits of biodiversity is key for managing human disturbances and ensuring sustainability.

8. Shanxi's transition from coal dependency towards a greener pathway reflects the potential for innovation in the face of global biodiversity and climate challenges. As a province historically reliant on coal[15], Shanxi is now among the leaders in China's renewable energy transition. With a strong incentive to diversify its economy, leveraging the province's rich natural capital provides opportunities for creating new jobs and growth in green sectors. Shanxi's 14th FYP (2021-2025) stipulates promotion of low-carbon green development, including the conservation and restoration of key ecosystems such as the Yellow River Basin and the Taihang and Lvliang mountain ranges. Shanxi's transformation is part of China's broader efforts to meet its biodiversity and climate goals. By investing in biodiversity, Shanxi will not only

[9] Global Forest Watch. 2023. https://www.globalforestwatch.org/dashboards/country/CHN/?category=undefined
[10] Jointly conducted and published by the Ministry of Ecology and Environment, the Chinese Academy of Sciences, and others, the China Red List assessment follows the criteria of the IUCN Red List of Threatened Species. The latest version was published in May 2023.
[11] Zang et al. 2016. Preparation of the China Biodiversity Red List and Its Significance for Biodiversity Conservation within China. Biod. Science 24 (5).
[12] Shrestha et al. 2021. Vulnerabilities of Protected Lands in the Face of Climate and Human Footprint Changes. Nature communications 12 (1).
[13] Lu et al. 2020. Spatial Variation in Biodiversity Loss Across China under Multiple Environmental Stressors. Science Advances 6 (47).
[14] An ecological corridor is a clearly defined geographical space that is governed and managed over the long term to maintain or restore effective ecological connectivity. (IUCN, 2020. Guidelines for conserving connectivity through ecological networks and corridors).
[15] In 2023 Shanxi was China's top coal producing province with an output of 1.38 billion tons, accounting for one-third of China's total coal production.

contribute to national targets but also create new economic opportunities and jobs in the province, serving as a model for other regions looking to transition towards a greener pathway.

9. Shanxi hosts globally significant biodiversity and supports a diverse array of ecosystems, serving as a crucial gene bank for northern China. Situated in the transitional zone between northern and southern climates, Shanxi has a mix of temperate forests, grasslands, wetlands, and mountainous areas, each supporting a variety of plant and animal species, including 2,743 species of wild higher plants, and 541 species of terrestrial vertebrates. Besides the large number of resident species, Shanxi is also located in the Yellow River Basin, the second largest river basin in China, having multiple wetland ecosystems that serve as important breeding and stop-over areas for migratory birds along the East Asian-Australasian Flyway. In particular, the Yuncheng Wetland Nature Reserve located in southern Shanxi was identified as an internationally Important Bird Area (IBA)[16] in 2009 for providing critical over-wintering habitat for the Whooper Swan and Common Crane. Other important species present are the Black Stork and the Great Bustard, both included in China's list of National Class I protected wildlife species. Furthermore, the Taihang Mountain Area, which covers the entire territory of Shanxi as well as some districts in Beijing, Hebei and Henan provinces, is among the 35 biodiversity hotspots identified by the China BCSAP (2023-2030). As a result, this area has also been identified as one of the 49 priority landscapes in the national NP spatial layout plan, with the future Taihang Mountain National Park (TMNP, currently starting its preparation planning phase) expected to cover mainly parts of southern Shanxi and some parts in northern Henan. As such Shanxi's efforts to lead the establishment of the TMNP will also contribute to the overall development of the NP system in China as part of its commitments to implement the GBF and generate valuable knowledge and globally relevant lessons.

10. Importantly, Shanxi is also the core area for the distribution of the North China Leopard (NCL), an endemic subspecies of the leopard in China whose population is less than a few hundred individuals.[17] Because of its fragmented distribution and small population, the NCL is included in China's list of National Class I key protected wildlife[18] and is among the 48 critically endangered wild animals to be protected in the National Wildlife Protection Plan. As an apex predator and umbrella species[19], a stable and increasing NCL population is also an indicator of a healthy ecosystem supporting a range of prey and other endangered species, such as the Brown-Eared Pheasant (BEP) and Siberian Musk Deer that are also found in Shanxi. While the NCL is distributed across large areas in northern China, Shanxi has the largest number of reported NCL individuals and the most concentrated population in China. From the second national terrestrial vertebrate census conducted in 2011, 132 NCL individuals were recorded in Shanxi, with 8 concentrated distribution areas. In addition, Shanxi is at the center of the overall distribution area of the NCL in northern China, and the leopard populations in the surrounding provinces of Hebei and Henan are likely to have close communication with the Shanxi population. Therefore, conserving the NCL population in Shanxi Province is crucial for the recovery of the NCL population in the country.

11. Biodiversity conservation in Shanxi faces constraints that are typical of other areas in China. While decades of monoculture plantation establishment in China have increased its tree cover, they have also diminished forest quality and reduced suitable habitats for wildlife survival. While existing PAs are well protected, they are often too small and fragmented to support sustainable populations of leopards and other species. Additionally, the areas surrounding PAs may not be effectively managed, leading to continued degradation of suitable habitats. The construction of roads, energy facilities and urban expansion has fragmented previously contiguous habitats, isolating animal populations and limiting

[16] https://datazone.birdlife.org/site/factsheet/yuncheng-wetland-nature-reserve-iba-china-(mainland)/details

[17] The IUCN Red List of Threatened Species classifies the leopard *Panthera pardus* as Vulnerable to extinction globally and notes that the sub-population in northern China, *P. p. japonensis*, meets the criteria for listing as Critically Endangered/Endangered, having a small, steeply declining population (<500 individuals) due to habitat loss and fragmentation and low prey numbers, warranting urgent conservation action and a full assessment of the sub-species. Stein, A.B. et al. 2023. *Panthera pardus*. The IUCN Red List of Threatened Species.

[18] Laguardia et al. 2015. The current distribution and status of leopards Panthera pardus in China. Oryx. 1–7.

[19] The IUCN defines an umbrella species as a species that protects many other species and their ecosystems when it is conserved.

their ability to migrate, hunt, and breed. Wildlife corridors, which are essential for species migration and genetic diversity, are often lacking or blocked by human activities and infrastructure. At the same time, insufficient monitoring and rescue capacity, exacerbated by limited technical resources and personnel, hampers effective conservation, while gaps in knowledge and baseline data on species like the NCL hinder informed decision-making. In many areas, especially rural parts of Shanxi, public awareness of the importance of biodiversity conservation is limited, with human disturbance contributing to habitat degradation. Climate change is also a key driver for biodiversity loss in Shanxi. Studies have found that changes in precipitation and temperature due to climate change will lead to the reduction and fragmentation of suitable habitats of the NCL,[20] as well as to a decline in prey population such as ungulates.[21] Rising temperatures are also expected to lead to more frequent droughts, wildfires, and invasive pest outbreaks, leading to the loss of plant species[22] and the degradation of wetland ecosystems undermining their habitat functions, especially for migratory bird species.

12. Shanxi's BCSAP (2024-2030) and Wildlife Protection Plan (2022-2035) outline a long-term strategic pathway for comprehensive biodiversity conservation in the province. The BCSAP outlines a number of strategic tasks and actions, including promoting nature education and raising public awareness around PAs, strengthening biodiversity surveys and monitoring systems, and enhancing in-situ and ex-situ species conservation planning for the protection of flagship, rare and threatened species through restoration of natural habitats, development of ecological corridors, construction of botanical and zoological gardens, and breeding and rescue centers. By 2035, Shanxi aims to establish a comprehensive framework of policies, regulations, and monitoring systems for biodiversity conservation leading to significant improvements in the quality and function of its ecosystems, the recovery in the populations of priority species and a more harmonious relationship between nature and local communities. The Shanxi Wildlife Conservation Plan (2022-2035) outlines several key priorities for wildlife conservation, including: NCL conservation; conservation of other priority species; conservation of migratory bird flyways; promoting ex-situ conservation; developing wildlife rescue systems and breeding programs; wildlife disease control; and wildlife damage compensation schemes. Furthermore, to tackle the issue of degraded and poor-quality wetland ecosystems, Shanxi adopted a provincial wetland conservation regulation in 2023.

13. The proposed project will support innovations in natural resource management in Shanxi towards more biodiversity-friendly practices that will also contribute to China's biodiversity conservation efforts under the GBF. Over the past forty years, China has achieved impressive growth in forest area, primarily through plantation development. As a result, China now has the largest area of forest plantations in the world, covering approximately 79.54 million hectares.[23] However, the majority of these plantations are monocultures, with around 80 percent consisting of a single species, such as bamboo, poplar, Chinese fir, Masson pine, and eucalyptus.[24] While these monoculture plantations have contributed to forest expansion, they have also led to habitat fragmentation and diminished the ecological functions of forests, often being referred to as "green deserts". Transforming these monoculture plantations into more biodiversity-friendly mixed-species forests presents significant opportunities for enhancing biodiversity.[25] Additionally, mixed-species forests in China have been shown to sequester significantly more carbon than monocultures and are less vulnerable to pests and fires which are becoming increasingly exacerbated by climate change[26]. The project will support the transition from single-objective forestry sector development to multi-objective and biodiversity-oriented forestry in Shanxi through restoring and connecting priority habitats for key biodiversity species. Techniques for habitat restoration and corridor establishment through monoculture transformation currently remain at very early stage with only small pilots. The project will invest in

[20] Zhu et al. 2024. Impact of carbon neutralization policy on the suitable habitat distribution of the North China Leopard. Scientific Reports.
[21] Dragonetti, C. et al. 2023. Scenarios of change in the realized climatic niche of mountain carnivores and ungulates. Conservation Biology.
[22] US National Park Service. 2021. Plants and Climate Change.
[23] State Forest Administration (2019). Report of forest resources in China (2014–2018). China Forestry Press, Beijing.
[24] World Bank, 2019. Review on Sustainable Forest Management and Financing in China.
[25] Hua et al., 2016. Opportunities for biodiversity gains under the world's largest reforestation program. Nature Communications, 7.
[26] Ma et al., 2024. Early advantage for carbon sequestration of monocultures and greater long-term carbon sink potential of broadleaf mixed forests: 20-year evidence from the Shanghai Green Belt. Ecological Indicators, 159.

enhanced data collection systems for continuous monitoring and evaluation (M&E) of project interventions and outcomes to generate knowledge, lessons learned, and evidence-based technical standards. For priority plant species that are threatened, a combination of in-situ and ex-situ measures will be utilized to provide enhanced conservation in line with international best practices[27]. The knowledge generated from the project will offer significant potential for replication for other areas in China and serve as a reference point for leopard and other species conservation worldwide.

14. The proposed project will contribute to the provision of global public goods, for which public sector investment is justified. The project will contribute directly to conserving globally significant biodiversity resources in China's Shanxi province, contributing to halting and reversing global biodiversity loss. Biodiversity provides essential ecosystem services, which are often shared widely across populations, making them difficult to monetize in ways that attract private investment. As a result, without public sector involvement, biodiversity conservation may be underfunded, leading to ecosystem degradation and loss of valuable resources. In addition, it will directly contribute to global climate change mitigation through carbon sequestration from the restoration of ecosystems and habitats. Finally, the project will generate knowledge and experience on the implementation of the GBF which can provide models for replication in other parts of China as well as globally. Knowledge generated under the project will also be disseminated to other countries facing similar challenges, especially in Africa, South and Central Asia, through the China-World Bank Group Global Center for Ecological Systems and Transitions launched in December 2024.

C. Proposed Development Objective(s)

Development Objective(s)

The Project Development Objective is to restore priority habitats and enhance in-situ and ex-situ conservation for priority species in targeted areas of Shanxi Province.

Key Results

15. Results towards the achievement of the PDO will be measured using the following three indicators.

Table 1: PDO Outcome Areas and Indicators

PDO Outcome Area	PDO Indicator
To restore priority habitats for priority species in targeted areas of Shanxi province	**PDO Indicator 1: Landscapes under enhanced conservation and/or sustainable management (terrestrial and inland water areas) (hectares, Scorecard Indicator).** This indicator will measure the effective restoration of 10,177.5 hectares including: (a) priority habitats restored and/or under sustainable management for NCL and other priority flora and fauna species, e.g. BEP; and (b) priority wetlands restored for rare or threatened migratory birds such as Black Stork and Common Crane.
	PDO Indicator 2: Provincial plan for NCL habitat restoration and OECMs developed and submitted to provincial authorities for approval. This indicator measures the enhancement of institutional capacities through the development of a Provincial Plan for NCL Habitat Restoration and OECM for the NCL outside of PAs building on the project's experiences.
To enhance in-situ and ex-situ conservation for priority species in targeted areas of Shanxi province	**PDO Indicator 3: Conservation plans for priority species developed and under implementation through in-situ and ex-situ measures.** This indicator will measure the development and implementation of 23 in-situ and ex-situ conservation plans for 19 priority species that are rare, endemic, or threatened, according to credible international or national lists, such as the IUCN Red List of Threatened Species and Chinese Red List of Threatened Species.

D. Project Description

[27] IUCN Species Survival Commission Guidelines on the Use of Ex-situ Management for Species Conservation.

16. Targeted Areas: Project investments in ecosystem restoration and in/ex-situ conservation will take place in targeted areas within the jurisdictions of a provincial-level SFF[28] (Zhongtiao) and four counties (Heshun, Yangcheng, Wenxi, and Hejin) in Shanxi. These jurisdictions were selected based on two key criteria: (a) relevance - alignment with conservation priorities, i.e., including degraded ecosystems that are priority habitats or corridors for NCL populations, migratory birds and other priority species; and (b) fiscal – with willingness and capacity to borrow. The Zhongtiao Mountain area, located in Southeastern Shanxi, is the largest concentrated distribution area for the NCL in the province with 82 individuals currently detected. Most of the leopard populations however are currently isolated within two National Nature Reserves (NRs)[29], namely Lishan and Manghe, both of which are located within the Zhongtiao SFF. However, these are not sufficient to support a viable and healthy leopard population, with critical corridors and other priority NCL habitats within Zhongtiao SFF and adjacent Yangcheng and Wenxi counties currently covered by monoculture plantations. Heshun county, located further north, acts as a critical corridor connecting two critical mountain ranges identified in Shanxi's BCSAP, namely Taihang and Lvliang, and houses a significant NCL population (at least 48 individuals) currently isolated within a Provincial NR (Tieqiaoshan). Targeted areas for NCL restoration were identified through a habitat modelling exercise that first identified the priority NCL habitats within each jurisdiction, and then through application of selection criteria by local and national experts. In Hejin county targeted areas will be within and adjacent to the Yuncheng Provincial Wetland NR, an IBA for migratory birds, prioritizing the restoration of degraded wetland and riparian habitats.

17. Component 1: Investments in Ecosystem Restoration and Species Conservation (Total Cost: US$65.64 million, of which IBRD US$46.54 million and Borrower US$19.10 million). This component supports ecosystem restoration through the rehabilitation of priority habitats for the threatened NCL population in Shanxi, as well as conservation of other priority species in the targeted areas. It will contribute to the PDO by increasing the terrestrial and aquatic areas under enhanced conservation and management, and by enhancing the conservation of priority species through in-situ and ex-situ measures. Ecosystem restoration under this component will also generate substantial carbon sequestration benefits.

18. Component 2: Strengthening Knowledge and Institutional Capacities for Biodiversity Conservation (Total Cost: US$72.52 million, of which IBRD US$50.21 million and Borrower US$22.31 million). This component will provide the knowledge, tools, and capacity needed to sustain long-term biodiversity conservation outcomes. It will contribute to both PDO outcomes by strengthening knowledge and institutional capacities for ecosystem restoration and biodiversity conservation in Shanxi and enable the replicability and scale-up of project experiences in other areas within the province through development of a provincial plan, as well as in other provinces with similar conditions in China and globally.

19. Component 3: Project Management (Total Cost: US$3.81 million, of which IBRD US$3.25 million and Borrower US$0.56 million). This component will finance goods, consulting and non-consulting services, and incremental operating costs to ensure effective and efficient project implementation. Activities include: (a) project management support at provincial and county level through purchase of necessary office equipment, and strengthening of technical, fiduciary, and environmental and social (E&S) capacities through hiring of specialized consultants as needed; (b) support for compliance with E&S risk management instruments, grievance redress, gender aspects, and citizen engagement; (c) development and maintenance of a project communication and visibility plan; (d) monitoring of the project's Results Framework as well as

[28] State Forest Farms are state-owned forest management units under the NFGA established for the purpose of managing and conserving forest resources within a designated management area. Historically, these SFFs have been managed using a narrow set of objectives and practices (e.g. timber production through monocultural tree plantations), often leading to forest fragmentation, soil and land degradation. There are currently 4,855 SFFs in China, which employ 750,000 people and cover 77 million hectares or 8% of the total land area of China.
[29] Nature Reserves are a category of PAs in China (see footnote 7).

broader biodiversity M&E of targeted areas, as well as E&S performance (third-party monitoring); (e) other eligible operational expenses related to project management and implementation.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

20. Environmental risks are Substantial. Overall, the expected environmental impacts of the project are positive by a large factor, while risks and adverse impacts are predicable, temporary and localized, and institutional capacity for their management will be strengthened. The terrestrial and wetland habitat restoration and connectivity activities and the conservation activities for priority species are expected to improve ecological functions and wildlife habitats and to increase the population size and distribution of important species, therefore the project will bring large positive environmental impacts. Potential negative impacts associated with the project's investments include: (a) the potential use of pesticides, soil and water loss, invasive species, forest fire, disturbance to wildlife, management of organic waste (waste plants) and Occupational Health and Safety (OHS) issues generated from the afforestation and forest management under the habitat restoration and management activities; (b) the potential soil and water loss, dust, noise nuisance, solid waste and OHS hazards associated with the construction of infrastructure to be supported, including a botanical garden, scientific research stations, wildlife breeding, release, and rescue stations, and nature education centers, and upgrading of existing forest roads, as well as the installation of the biodiversity monitoring equipment and boundary markers and signage; (c) potential domestic wastewater and domestic waste (including manure from wildlife breeding) generated during the operation of the project supported infrastructures. These potential negative environmental impacts are anticipated to be site-specific, short-term, low magnitude, reversible and manageable by following the environmental mitigation hierachy. The project supports various technical assistance activities to strengthen provincial/county level institutional capacity for improved ecosystem management. The Technical Assistance activities will lead to improved biodiversity and ecosystem management efficiency to optimize ecological functions and share the ecosystem service benefits with local communities, hence will bring long-term positive environmental impacts and limited adverse environmental risks are expected. An environmental assessment has been conducted as per ESF requirments. The environmental risk is rated as substantial considering that some of the project activities will be implemented within PAs.

21. Social risks are considered High due to complex land use arrangements of collective lands which will require close monitoring and consultation with communities, as well as labor and OHS risks. While conflict and security management risks are not expected to be high, as per the due diligence conducted during project preparation, these risks should also be given adequate attention due to risks associated with projects of similar nature. To address potential risks associated with patrolling by ecological rangers and administrative law enforcement, and by forest police in criminal law enforcement, the Bank conducted due diligence on domestic systems. The due diligence included review of local legislation, regulations, standard operating procedures and protocols of ecological rangers, administartive law enforcement and forest police, consultation with project communities, and a media monitoring. Due diligence indicated the presence of protocols for local law enforcement that are aimed at prevention and de-escalation of violent conflict and preventing the excessive use of force. There were no reported incidents of conflicts over use of forest resources arising to date per review of online records and social media, community consultations and interviews with key stakeholders. The project will establish training and awareness measures, strict monitoring over the work of the project-involved rangers,

as well as grievance and incident reporting mechanisms which can be used by any party in the project areas to report potential incidents, conflicts, or grievances. Third party monitoring will be instituted to provide additional supervision and reporting on the project's interaction with local communities, and any community health and safety concerns. The Social Impact Assessment (SIA) considers risks associated with increased wildlife population such as risks for humans and cattle, and includes mitigation measures in three areas: community awareness and prevention, livelihood support in the event of access restricitons arising from such prevention measures, as well as grievance and incident reporting protocols to enable monitoring of this risk during project implementation. Training and awareness sessions for communities and rangers in the project areas will include measures to prevent and protect from risks of human-wildlife contact.

22. The project will finance habitat restoration of approximately 10,000 hectares, including NCL and bird habitats, of which about 10 percent are collectively owned by 29 villages with approximately 11,500 residents. Restoration activities on collective lands will be conducted based on an agreement to be signed between the management of the collective organization and the county FGA, under which collectives will receive compensation financed from the county budget. Income, livelihood, and any direct material losses to the collective or to individual members will be compensated in line with ESS5 and the Project Resettlement Framework (RF). Two of the villages whose collective lands fall within the project restoration area, are located in legally designated PAs. A Process Framework (PF) has been prepared to address potential adverse impacts resulting from access restrictions on local communities occurring within legally designated PAs. The project will also finance construction and renovation of facilities such as a botanic garden, nature education centers, management/scientific monitoring stations, wildlife rescue centers, NCL prey breeding centers, and road upgrading. Approximately 390 hectares will be needed for the construction activities, the majority of which (95 percent) will occur on collective lands. Land for these activities will be obtained through the transfer of land use rights from the collective to the respective county FGA. Approximately 148 households (394 people) are expected to be economically impacted as a result of this land transfer. Impacts to the collectives and to specific households, individuals, and entities will be compensated in accordance with the project RF. Site-specific screening will be conducted prior to the beginning of each project activity to confirm resettlement impacts. Site-specific Resettlement Plans, Livelihood Restoration Plans (in line with RF) and/or participatory Plans of Action (in line with the PF) will be prepared where applicable and implemented to mitigate these impacts. Physical displacement is not anticipated or considered necessary for the achievement of project objectives; therefore, activities requiring physical resettlement are considered ineligible under the project. The project will hire 114 community rangers through counterpart funding whose main responsibilities will be to support maintenance of project investments in restoration, biodiversity data collection and nature education centers, to support fire detection and prevention, and to collect monitoring data from project installed cameras. The TOR for these community rangers will be included in the POM and approved by the Bank. All project workers, including the community rangers, will be contractually obligated to follow the project code of conduct. To continuously monitor and manage such risks, the project will include training and awareness sessions for project workers, communities, and local officials (including law enforcement) on the E&S requirements of the project, including adherence to the code of conduct, and project grievance and incident reporting mechanisms. A detailed incident reporting protocol will be included in POM. Information on incidents handled by law enforcement authorities may be limited due to confidentiality associated with criminal cases. The risk associated with such data limitations will be mitigated through continuous media scanning and regular communications between PMO and the forest police. There is no ethnic minority (EM) presence in project areas. There is an overall small presence of EMs in Shanxi (about 0.27 percent of the population belonging to 53 ethnic groups) who are mainstreamed into society and do not meet ESS7 criteria. Overall, social risks will be managed through the implementation of the project Social Management Plan (SMP), RF, PF, LMP, and SEP.

23. E&S risk management instruments. The Bank conducted E&S due diligence informed by Borrower prepared E&S instruments, field visits, and discussions with key stakeholders. Potential negative environmental risks and impacts are anticipated to be site-specific, short-term, low magnitude, reversible and manageable by following the environmental

mitigation hierachy. Potential social risks and impacts include access restrictions, land use through long term contractual arrangements, and land acquistion, potential risks of exclusion or inequitable benefit sharing from compensation agreements, labor and OHS risks, as well as security and conflict risks arising from access restrictions in and outside of PAs. These impacts will be mitigated through procedures described in the SMP, RF, PF, SEP, and LMP. To address the above impacts and associated risks, the Bank also conducted due diligence review on administrative and criminal law enforcement in Shanxi. The Borrower has prepared an Environmental Impact Assessment (EIA) with an integrated Environmental Management Plan (EMP), a SIA with an integrated SMP, SEP, LMP, RF, and PF as overarching E&S instruments to cover all project-supported activities to guide project implementation. These instruments include requirements for E&S risks screening/assessment, E&S mitigation measures, an exclusion list of project investments, guidance for conducting land due diligence, community consultations and participatory decision-making prior to specific investment decisions, E&S monitoring, and borrwer's capacity building. Key E&S requirements are reflected in the Environmental and Social Commitiment Plan (ESCP). A Project Summary indicating availability of project E&S instruments at local PFGA offices was disclosed on the PFGA website on Oct 21, 2024. The E&S instruments were subsequently also disclosed on the PFGA website on January 22, 2025 and on the Bank's website on Feburary 11, 2025.

24. **Project GRM.** The project will put in place a GRM available to all potential beneficiaries and stakeholders, including project workers, to submit queries or complaints about project implementation. Grievances received will be responded within a publicly stipulated timeline. The operational procedures of the GRM (including entry points for beneficiaries to submit queries and complaints), responsibilities, and timeline for handing complaints are described in the SEP, SIA/SMP, RF, PF, and will be further detailed in the POM. The project will widely disseminate the GRM among project beneficiaries through various channels, including the annual beneficiary survey.

25. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, visit https://accountability.worldbank.org.

E. Implementation

Institutional and Implementation Arrangements

26. **The Shanxi Provincial Forestry and Grassland Administration (P-FGA) will act as the Implementing Agency with a Project Management Office (PMO) housed in the PFGA Accounting Center.** The latter is an affiliated agency under the PFGA responsible for managing foreign loan supported projects in the forestry sector in Shanxi, in coordination with technical divisions of the PFGA. The PMO has successfully implemented four World Bank financed forestry projects, covering 11 municipalities and 60 counties with a total investment of about USD 115 million, among which about USD 50 million were IBRD financing. The PMO will be responsible for: (a) preparing annual workplans and budgets in coordination with PIUs; (b) organizing and overseeing procurement, financial management and disbursement processes; (c) conducting quality control of TOR and technical specifications of project activities to ensure alignment with project design and the Bank's E&S and fiduciary policies; (d) organizing expert teams to conduct third-party E&S and biodiversity M&E; and (e) preparing and submitting semestral progress reports to the Bank. It will also coordinate with the Technical Expert Group

to provide guidance and technical support to the PIUs through training and dissemination of best practices and technical standards, as well as rigorous M&E of restoration activities. The PMO is staffed with personnel with specialization in forestry and project management, including financial management and procurement, and will assign staff to act as focal points for E&S and M&E aspects. E&S specialists with past experience in Bank operations will be hired by the PMO to assist management of E&S risks, and its capacity will be strengthened as needed during project implementation in terms of fiduciary, M&E and other needs to ensure effective and efficient project management.

27. **At the local level, five Project Implementation Units (PIUs) will be established within the Zhongtiao SFF and the four County FGAs that will be responsible for the execution of project activities in the field.** These will include small-scale civil works, training and awareness raising for local staff and communities, forest and habitat restoration and management, wildlife conservation activities and other day-to-day project management and field work. PIUs will assign fiduciary, E&S, and M&E focal points and their capacity will be strengthened through project funds as needed during project implementation. The County Finance Bureaus will be responsible for project budget planning, fund allocation and expenditure supervision, and the County Auditing Bureaus will be responsible for project auditing.

28. **Project Leading Groups (PLG) will be established at provincial and county levels.** The provincial PLG will be chaired by the PFGA Deputy Director and composed of relevant technical divisions of the PFGA; the Provincial Development and Reform Commission and Provincial Department of Finance to oversee budget allocation and funds management; as well as the Provincial Departments of Ecology and Environment, and of Natural Resources to provide technical guidance and ensure policy coherence of project activities with provincial biodiversity and other related plans. The PLG will be mainly responsible for: (a) overseeing project progress through semiannual meetings or when requested by its members; (b) providing leadership and guidance on project management and implementation; (c) coordinating cross-sectoral collaboration with other agencies when needed; (d) facilitating decision making and ensuring stakeholder buy-in. PLGs will also be established at the local level in each of the five jurisdictions, headed by vice county mayors and mirroring the provincial-level PLG structure and providing similar support and oversight.

CONTACT POINT

World Bank

Stavros Papageorgiou
Senior Natural Resources Management Specialist

Xiawei Liao
Environmental Specialist

Ms. Anisi
Senior Operations Officer

Borrower/Client/Recipient

People's Republic of China
Xiang Peng
Director
zjc@mof.gov.cn

Implementing Agencies

Shanxi Provincial Forest and Grassland Administration
Zhihui Liu
Deputy Director
xmb1630@163.com

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Stavros Papageorgiou, Xiawei Liao, Ms. Anisi

Approved By

Practice Manager/Manager:	Christophe Crepin	11-Nov-2024
Country Director:	Alejandro Alcala Gerez	11-Feb-2025