



# Technical Assistance Report

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Project Number: 39321  
December 2005

## Technical Assistance People's Republic of China: Preparing the Shaanxi- Qinling Mountains Integrated Ecosystem Management Project

## CURRENCY EQUIVALENTS

(as of 15 November 2005)

Currency Unit	–	yuan (CNY)
CNY1.00	=	\$0.123
\$1.00	=	CNY8.085

## ABBREVIATIONS

ADB	–	Asian Development Bank
EA	–	Executing Agency
EAR	–	environmental assessment reports
EP	–	expert panel
GEF	–	Global Environment Facility
GMS	–	Greater Mekong Subregion
IA	–	implementing agency
IEE	–	initial environmental examination
LG	–	leading group
MOU	–	Memorandum of understanding
M&E	–	monitoring and evaluation
PDF	–	Project Development Facility
PMO	–	project management office
PRC	–	People's Republic of China
QM	–	Qinling Mountain range
SP	–	Shaanxi province
SPDRC	–	Shaanxi Provincial Reform and Development Commission
TA	–	technical assistance

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Targeting Classification</b>	–	General intervention
<b>Sector</b>	–	Agricultural and natural resources
<b>Subsectors</b>	–	Agricultural production, environment and biodiversity, livestock, forestry, irrigation and drainage, and water resources management
<b>Themes</b>	–	Sustainable economic growth, inclusive social development, private sector development, and environmental sustainability
<b>Subthemes</b>	–	Sustainable economic growth, inclusive social development

## NOTE

In this report, "\$" refers to US dollars

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## I. INTRODUCTION

1. During the October 2004 Country Programming Mission, the Government of the People's Republic of China (PRC) requested technical assistance (TA)<sup>1</sup> from the Asian Development Bank (ADB) to prepare a loan and Global Environment Facility (GEF) grant-financed project for the Shaanxi-Qinling Mountains Integrated Ecosystem Management Project. After receiving ADB Management's endorsement of the concept for this TA, the Fact-Finding Mission in March 2005 held discussions with the government of Shaanxi province (SP), and reached an understanding on the detailed objectives, scope, cost estimates, terms of reference for consultants, and financing and implementation arrangements to prepare the project. Subsequently, the Government requested that the ADB TA and the proposed GEF component be separated.<sup>2</sup> ADB's TA will support the SP government in preparing a biodiversity conservation and tourism development project at Louguantai in the Qinling Mountains. The project is environmental category B and will entail the preparation of an initial environmental evaluation.

## II. ISSUES

2. The Qinling Mountain (QM) range is located immediately to the south of Xi'an, the provincial capital, and runs east west straddling the southern part of SP, in the western region of the PRC. It is biologically rich and globally significant, with many endangered rare and/or endemic plant and animal species. The best known of these is the giant panda, and also has the only known wild population of one of the world's rarest birds, the crested ibis (national bird of Japan). The mountains are characterized by very high levels of endemic biodiversity found in temperate and subtropical ecosystems, as well as a vertical spectrum of vegetation types; 70% of all vegetation types in the PRC are found here.<sup>3</sup> The range forms the dividing line between the south and north of the country, and has a major climatic influence on northern PRC, and the water resources of both the Yellow and Yangtze rivers. The southern slopes are a major water source for the middle line of the South to North Water Transfer Project, and contribute over 50% of water stored in the Danjiangkou Reservoir on the Yangtze River. The northern slopes supply water to the Yellow River system, which flows to the dry northern parts of the country. Over 90% of the range lies within SP, and 70% of the total range (about 40,000 square kilometers (km<sup>2</sup>) of the total range area of about 57,000 km<sup>2</sup>) has been highly degraded due to inappropriate farming, logging, overuse of natural resources, destructive mining operations, as well as

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<sup>1</sup> Previously titled Technical Assistance for Preparing the Shaanxi Qinling Integrated Ecosystem Management Project and the Ningxia Yinchuan Integrated Ecosystem Management Project. Following the Government's request in June 2005, it was divided into two separate TAs. The TA first appeared in *ADB Business Opportunities* (Internet edition) on 18 April 2005.

<sup>2</sup> Given the important opportunity that this project presents in addressing globally significant biodiversity issues in the Qinling Mountain (QM) range, both the Government and ADB recognize the need for this project preparatory TA to closely collaborate with the planned application of the GEF grant by the Government for the QM range. In this context, the Government confirmed that it will enable close collaboration between ADB's TA team and the team responsible for preparing the GEF grant, which, if obtained, will be made available for the ADB project (para. 15).

<sup>3</sup> The QM contain many of the world's highly endangered animal, bird and plant species. Over 15 animal species have been listed by World Wildlife Fund (WWF) and the national priority protection wildlife list, including the giant panda, golden takin, golden snub-nosed monkey, brown-eared pheasant, crested ibis, red panda, clouded leopard, and giant salamander. The QM contains the highest giant panda population in the PRC, being home to approximately 40% the total wild panda population. Many important plant species are endemic (1,428 species), relic, rare or endangered, including the ginkgo, one of the oldest tree species in the world. The Chinese mountain larch, oneflower kingdonia, the important source-species of the cultivated paeony, the Mao-tai maple, and the Chinese fir are also highly endangered and therefore listed by the Government as protected species.

pollution from solid waste and agrochemicals over many decades. As a result, water resources are in serious decline.

3. The State Environmental Protection Agency (SEPA) nominated the Qinling Mountains Ecosystem Function Area (QMEFCA) as a national pilot program in 2001. The area contains 19 nature reserves, but many of these are inadequately financed and lack modern management. The SP government in 2003 recognized the QM as a national-class ecological function protected zone, and approved the Shaanxi-QM ecological function protected zone plan. Further, in June 2003, the SP government issued notification of special measures for the northern footslopes of the QM, which aimed to prosecute violators of the laws and regulations for eco-environmental protection. Many illegal mining sites have been closed, some existing tourist sites have been rejuvenated, cultivation on slopes exceeding 25 degrees has been banned, the environmental impact assessment of proposed projects has been reexamined, polluters and illegal loggers have been fined, and vegetation belts have been established.

4. Approximately 4.9 million people live within the overall QM range. Poverty is widespread, with pervasive small-scale agriculture on steep slopes, very limited infrastructure throughout the rugged and isolated valleys, with few links to the modern economy. In 2004, the average annual income of urban residents was CNY5,928 (\$733.2 ) while the average annual per capita income of the rural population was only CNY1,050 (\$129.9), or 35% of the poverty level on a \$1/day basis. Although many government agencies have responsibility for delivering services and projects for water and soil conservation, agriculture and livestock, conservation and natural resource management and social services, there is no strategy for combating land degradation or promoting sustainable development. SP is world-class in using a market approach to create wealth from its history and culture; e.g., in 2002, Xi'an with its excellent ancient architecture, museums, hotels, and sophisticated tourism services received 19.7 million tourists, of whom 0.74 million were from overseas. The terracotta warriors site alone earned the equivalent of \$25 million from 1.9 million tourists, which is expanding at about 10% annually. However, SP has yet to capitalize on its wonderful potential for tourism related to the unique collection of plants, animals, and birds that live in and around the QM.<sup>4</sup> There is an outstanding opportunity to promote conservation-based tourism linked to the growing domestic and international demand at sites such as that of the terracotta warriors, and to create employment and wealth in the QM for the future promotion of sustainable conservation.

5. The main project site is located in Zhouzhi County, between the Tianyu River and the Chiyu River, on hilly land south of provincial road S107. It is about 1-hour drive on excellent roads south of Xi'an. The core area of approximately 458 km<sup>2</sup> is on the site of the existing Louguantai Historical and Cultural Area. It is bounded by a small existing zoo/animal clinic with rare animals (giant panda, golden monkey, crested ibis, etc.) that is currently under reconstruction, and an existing botanical garden with a large collection of bamboo species and other native and introduced plants. Currently, the existing botanical garden attracts 200,000 visitors and in 2004 generated CNY6 million. In 2004, 30,000 visitors went to the existing zoo/clinic and generated CNY300,000. An additional 100,000 visitors went to the ancient Tao temples and other cultural sites in the vicinity, free of charge.

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<sup>4</sup> The terracotta warriors near Xi'an, the eighth wonder of the world, and other cultural sites, represent the world standard. The best sites attract a steadily growing number of domestic and international tourists, are profitable, and have a guaranteed future from internally generated funds. However, biodiversity conservation is not similarly presented to international standards and, therefore remains heavily dependent on limited public finance.

6. The project will pursue a market-driven approach to biodiversity conservation, featuring commercial tourism and sustainable land management, and well-managed conservation. It will develop a modern biodiversity conservation, tourism, and education facility at Louguantai; policy/strategy and institutional capacity building for the site; habitat restoration; sustainable livelihood; and a modern system of ecosystem monitoring. The project will demonstrate modern best practices and commercial management and will foster potential links throughout the wider Qinling range to support rural economic development, conservation, and poverty reduction. Appendix 1 describes the proposed project.

7. Related programs and projects that will offer valuable links and potential collaboration with the project include the ongoing PRC-GEF Partnership on Land Degradation in Dryland Ecosystems, and the GEF/ADB-financed Capacity Building to Combat Land Degradation Project, that is ongoing in six western region provinces/autonomous regions including SP.<sup>5</sup> The World Bank has undertaken previous conservation investments in the QM, and is implementing other projects in the PRC that promote sustainable land management and biodiversity conservation (e.g., the Gansu-Xinjiang Pastoral Development Project, \$66.25 million loan and \$10.5 million GEF grant). ADB's 2006–2008 program includes six projects that are anticipated to involve a combination of loans and GEF grants for related efforts to promote sustainable natural resources management.<sup>6</sup>

8. The PRC's western region shares a common border with several of the Central Asian republics; to the south, a common border is shared with the countries of the Greater Mekong Subregion (GMS). Land degradation has serious economic, social, and environmental consequences in all these countries. As in the PRC, the causes of land degradation are multiple and complex, but are largely attributable to overexploitation of the natural resource base through unsustainable agricultural practices, overgrazing, deforestation, and natural disasters. Lessons from the project, especially the commercial approach to biodiversity conservation and ecotourism, will be relevant to operations in Central Asia, the GMS, and elsewhere.<sup>7</sup>

### III. THE TECHNICAL ASSISTANCE

#### A. Impact and Outcome

9. The impact of the Shaanxi-Qinling Mountains Integrated Ecosystem Management Project will be improved biodiversity conservation and reduced land degradation. To achieve this impact, the TA will design an investment project for the establishment of a commercially sustainable initiative for biodiversity conservation and tourism at Louguantai. The TA will have the following outputs: (i) an assessment of the enabling conditions for the Louguantai site, including policies, regulations, and incentives; (ii) appropriate institutional arrangements for the project, including those for capacity building; (iii) design of the Louguantai facility and core area (approximately 458 km<sup>2</sup>) as a commercial venue for biodiversity conservation, education, scientific display and research, and ecological and cultural tourism; and (iv) ecosystem monitoring to gauge the impact of conservation, tourism and land degradation control. A design

<sup>5</sup> TA 4357(G), *Capacity Building to Combat Land Degradation Project*, approved on 29 June 2004 for \$13.8 million, of which \$7.7 million was provided by GEF as a grant. It is supported by ADB-financed TA 4358 to *Support Implementation of the Capacity Building to Combat Land Degradation Project*, for \$1.2 million.

<sup>6</sup> Country Strategy and Program Update, May 2005.

<sup>7</sup> Two similar GEF-supported initiatives in Central Asia are (i) United Nation's Environment Programme's Sustainable Land Management Project in the High Pamir and Pamir-Alai Mountains - an Integrated and Transboundary Initiative; and (ii) ADB's project Central Asian Countries Initiative for Land Management. The Biodiversity Corridors Conservation Initiative is a new ADB regional TA project under preparation in the GMS countries.

and monitoring framework is in Appendix 1, and Appendix 2 gives the initial poverty and social analysis.

## **B. Methodology and Key Activities**

10. The key activities of the TA are (i) review and analysis of the enabling conditions, including policies, regulations, and incentives for sustainable development of the Louguantai site; (ii) institutional arrangements, including public/private roles and partnerships, and capacity building; (iii) design of the core area investment at Louguantai, inclusive of best international practices for business management and strategy for different market segments; identification of species of global importance, habitat restoration, scientific research and displays, small zoo/animal hospital/breeding center, ecological and cultural tourism, species protection (animals, birds, and plants), laboratories, conservation education for the general public, sewage and waste treatment facilities; access roads (approx. 55 km) and cableway (1.2 km); riverbank protection (2.6 km), power plant, telecommunications, vehicles, equipment and related facilities; and (iv) monitoring and evaluation to gauge the impact of restoring and protecting natural ecosystem functions, biodiversity conservation, combating land degradation and tourism.

## **C. Cost and Financing**

11. The total cost of the TA is estimated at \$700,000 equivalent, comprising \$255,000 in foreign exchange and \$445,000 equivalent in local currency. ADB will provide assistance in the amount of \$500,000 for the TA financed on a grant basis by ADB's TA funding program, including \$255,000 to cover the foreign exchange cost and \$245,000 equivalent for the local currency. The Government will provide \$200,000 equivalent of local costs, to cover in-kind counterpart costs and services. The cost estimates and financing plan are in Appendix 3.

## **D. Implementation Arrangements**

12. The Foreign Loan Support Project Management Office under the SP Government's Development Reform Commission (SPDRC) will be the Executing Agency. A leading group (LG) will be chaired by the responsible vice-governor, and coordinate involved agencies to ensure smooth implementation and act as a steering committee. The director general of the SPDRC will head a standing office to be set up under the LG. The office will (i) report to the LG, (ii) organize LG meetings (at least 3 times during the TA), (iii) oversee institutional coordination, (iv) review work programs and expenditures, and (v) liaise with central Government agencies and ADB. The project management office (PMO) will be established to provide administration support. The PMO will have expertise in plant and animal biology, economics, finance, tourism, marketing, legal and regulatory aspects, and information technology. PMO responsibilities will include (i) work plan development, (ii) administrative support, (iii) financial management, (iv) support for LG meetings, (v) information dissemination, and (vi) regular liaison with involved agencies. The PMO will engage 8-10 permanent staff and link closely to the existing group of the Qinling Botanical Garden. An expert panel (6-8 members) will advise the PMO and consultants and will be paid an honorarium.

13. The TA will be carried out over 8 months from March 2006 to November 2006. ADB will finance 50 person-months (11 international and 39 domestic) of consulting services. The consultants will work as a team under the overall leadership of the international team leader/biodiversity conservation and tourism specialist. The international consultants will have expertise in best international practices with respect to biodiversity conservation management and tourism, and project economics and finance. The domestic consultants will have expertise

in biodiversity conservation, business development and marketing, tourism, social development, environmental assessment, civil engineering, project economics and finance, and data coordination. Terms of reference are in Appendix 4. ADB will engage a firm in accordance with its *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for engaging domestic consultants. The process will follow ADB's quality- and cost-based selection method, with simplified technical proposal procedures. The consultants will procure equipment for the TA in accordance with ADB's *Guidelines for Procurement*.

14. At the end of the first month, the consultant team will submit an inception report and seminar and workshop plan to the Government and ADB, which will be discussed in a tripartite review meeting. A midterm report will be submitted to the Government and ADB at the end of the fourth month from the start of the TA, the findings of which will be discussed in a seminar or workshop, with stakeholders as participants, in a second tripartite review meeting. A draft final report (10 copies) to be submitted to the Government and ADB 1 month before the end of the assignment, will be presented by the consultant in the second seminar. A third tripartite review meeting will be held before the conclusion of the TA to discuss the draft final report. Comments generated during the second seminar will be incorporated into the final report in English and in Chinese (10 copies each), to be submitted to the Government and ADB at the end of the 8 months TA implementation.

15. The proposed GEF-financed project that will be prepared separately will address global environmental impacts. It may include the design of the following measures within a future GEF grant-financed investment to complement the ADB loan-financed baseline project: (i) an analysis of the enabling conditions, regulatory framework, institutional arrangements, and development of a strategy for sustainable land management in the wider QM; (ii) promotion of the national program of Ecosystem Function Conservation Areas (EFCA) within the QM; (iii) support for existing and new nature reserves, including the Louguantai site, and institutional capacity and financial mechanisms needed to support them to achieve global environmental best practices; (iv) an outreach program, linking the Louguantai facility and the wider QM, promotion of sustainable livelihood activities and conservation; and (v) a monitoring and evaluation system. The GEF-financed project will also support the potential replication/modification of the market-based approach at Louguantai in other reserves in more peripheral areas.

#### **IV. THE PRESIDENT'S DECISION**

16. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$500,000 on a grant basis to the Government of the People's Republic of China for preparing the Shaanxi-Qinling Mountains Integrated Ecosystem Management Project, and hereby reports this action to the Board.

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators <sup>1</sup>	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Improved biodiversity conservation, increased tourism and reduction in land degradation</p>	<p>No biodiversity species lost, increased distribution of endemic species, improved carbon sequestration</p> <p>All degraded land recovered in the Louguantai core area (approx. 458 square kilometers [km<sup>2</sup>])</p> <p>Increased tourism and commercial viability of the Louguantai facility</p>	<p>Survey results compared with the baseline</p> <p>Survey results compared with the baseline</p> <p>Tourism receipts and statistics; financial analysis of Louguantai tourism facility</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>▪ Project design is implemented effectively.</li> <li>▪ Government and Asian Development Bank (ADB) sign loan agreement.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>▪ Government priorities change, or Government is reluctant to accept the recommended design measures.</li> <li>▪ Lack of tourists. This will be mitigated by careful promotion and linkage to world-class venues in Xi'an (1-hour drive on excellent road), and excellent future Louguantai facilities.</li> </ul>
<p><b>Outcome</b> Project design in feasibility study agreed to by ADB and Government</p>	<p>Memorandum of understanding (MOU) signed by Government and ADB during appraisal mission in 2006</p>	<p>MOU</p>	<p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>▪ Government priorities for area do not change, and proceed as planned.</li> </ul>
<p><b>Outputs</b></p> <p>1. Project design and feasibility study suitable for ADB loan processing</p> <p>(a) Assessment of enabling conditions, regulations, institutions and strategy for market-based approach</p> <p>(b) Design of Louguantai conservation and tourism facility and surroundings (approx. 458 km<sup>2</sup>)</p>	<p>Project preparatory technical assistant (PPTA) final report submitted, October 2006</p> <p>Personnel trained from participating agencies during the PPTA</p> <p>Draft strategy and investment design for all components completed and consensus reached by midterm report, June 2006</p>	<p>Report reviewed and accepted by ADB and the Government</p> <p>MOU signed</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>▪ Government supports the designed project.</li> <li>▪ Global Environment Facility (GEF) grant is obtained to cofinance with ADB loan.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>▪ Commercial risk of nonviability at the Louguantai facility. This will be mitigated through full analysis of the facility and tourism market, and promotion linked to</li> </ul>

<sup>1</sup> The indicators are not time bound or quantifiable at this stage, and will emerge as a result of the study.

Design Summary	Performance Targets/Indicators <sup>1</sup>	Data Sources/ Reporting Mechanisms	Assumptions and Risks
<p>(c) Ecosystem monitoring</p> <p>(d) Institutional capacity building</p>	<p>Operational monitoring system</p> <p>Trained staff</p>		<p>world-class tourism venues and services in Shaanxi.</p> <ul style="list-style-type: none"> <li>▪ GEF grant not obtained. GEF is very supportive and has technically cleared the project. Government's assurance has been given that (i) GEF cofinancing, if obtained, will be made available; and (ii) there will be close coordination between the PPTA team and the team to design the GEF component.</li> </ul>
<p><b>Activities with Milestones</b></p> <ol style="list-style-type: none"> <li>1. Assess enabling conditions, regulatory framework, institutions and strategy for market-based approach at Louguantai <ol style="list-style-type: none"> <li>1.1 Undertake required assessments and develop strategy in consultation with sectors, industry and stakeholders (midterm report, July 2006)</li> <li>1.2 Finalize recommended interventions (final report, November 2006)</li> </ol> </li> <li>2. Louguantai conservation and tourism facility <ol style="list-style-type: none"> <li>2.1 Undertake business management, marketing strategy, financial analysis, and feasibility study of habitat restoration, facilities design for animal/bird/plant protection, scientific displays, plans for small zoo/animal hospital/breeding center, ecological and cultural tourism, conservation education (midterm report, July 2006)</li> <li>2.2 Design and costing of all other physical infrastructure including sewage/waste treatment, access roads, cableway, riverbank protection, power plant, telecommunications, vehicles, equipment, and related facilities (midterm report, July 2006)</li> <li>2.3 Finalize recommended interventions (final report, November 2006)</li> </ol> </li> <li>3. Ecosystem monitoring <ol style="list-style-type: none"> <li>3.1 Establish ecosystem monitoring system (final report, November 2006)</li> </ol> </li> <li>4. Institutional capacity building at Louguantai <ol style="list-style-type: none"> <li>4.1 Develop strategy and investment proposals in consultation with stakeholders (midterm report, July 2006)</li> <li>4.2 Finalize recommended interventions (final report, November 2006)</li> </ol> </li> </ol>			<p><b>Inputs</b></p> <p>A consulting team providing 50 person-months of consulting services: 11 international and 39 domestic</p> <ul style="list-style-type: none"> <li>▪ ADB: \$500,000</li> <li>▪ Government: \$200,000</li> </ul> <p>Inputs from the ongoing TA 4357 (G) the Global Environment Facility - financed Capacity Building to Combat Land Degradation Project in Shaanxi Province; and with relevant advice from other aid-supported activities in biodiversity conservation, tourism, and land degradation</p>

<sup>1</sup> The indicators are not time bound or quantifiable at this stage, and will emerge as a result of the study.

<p>5. Others</p> <ul style="list-style-type: none"><li>5.1 Prepare inception report and workshop plan (April 2006); 1st tripartite meeting</li><li>5.2 Conduct social assessments of gender, poverty, minority peoples, and involuntary resettlement aspects (July 2006); 2nd tripartite meeting</li><li>5.3 Conduct baseline surveys (May 2006)</li><li>5.4 Conduct financial, economic analyses (draft final report, October 2006); 3rd tripartite meeting</li><li>5.5 Conduct institutional analysis (May 2006)</li><li>5.6 Complete initial environmental examination (midterm report, July 2006)</li><li>5.7 Finalize project design and monitoring framework (final report, November 2006)</li></ul>	
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## INITIAL POVERTY AND SOCIAL ANALYSIS

### A. Linkages to the Country Poverty Analysis

<b>Is the sector identified as a national priority in country poverty analysis?</b>	<input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No	<b>Is the sector identified as a national priority in country poverty partnership agreement?</b>	<input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No
<p><b>Contribution of the sector or subsector to reduce poverty in the People's Republic of China (PRC):</b>            The country strategy and program for the PRC (2004–2006) outlines the Asian Development Bank's (ADB) strategy to support the Government's ongoing poverty reduction efforts. The majority of the poor live in the central and western provinces that lag well behind the eastern provinces in achieving the Millennium Development Goals, and where poverty is strongly correlated with the incidence of land degradation. The majority of ADB's lending, particularly for infrastructure, targets the poor interior provinces to help create a climate for pro-poor economic growth. Ongoing ADB-financed policy work is addressing poverty-related issues in health, education, social protection, nutrition, natural resources and biodiversity conservation, agriculture, land degradation, access to clean drinking water, and sanitation in rural areas. The program includes continued support for the government's fight against poverty by addressing environmental problems related to air, water, and land, and promoting rural development in mountainous areas in Shaanxi province (SP) and other western provinces/autonomous regions.</p> <p>The poverty partnership agreement (PPA), signed by the Government and ADB in September 2003, sets out strategies and interventions for poverty reduction. PRC and ADB will continue to cooperate on a broad range of activities related to policy and regulatory reform and capacity building in the environment sector, and support projects to address environment problems. Projects will be designed so that the poor capture some of the environmental benefits. To sharpen the poverty focus of environmental work, PRC and ADB are addressing land degradation by supporting the implementation of the 10-year (\$150 million, grant-financed) PRC-Global Environment Facility (GEF) Partnership for Degradation in Dryland Ecosystems to address policy, institutional, technical, and financing issues related to combating land degradation, and other projects using GEF grants and loan funds to reduce poverty, arrest land degradation, and improve environmental management in the western region.</p> <p>The Qinling Mountain (QM) range of SP where the project will be located has a total population 4.9 million people, or 13.8% of SP's total, with an average density of 83 persons per square kilometer. The project's activities will directly (through investments) or indirectly (through strategy/policy changes, improved planning and conservation, and long-term actions) impact the entire range. The QM covers 38 counties and 7 cities, of which 74% are classed as national or provincial poverty counties. Poverty is widespread, with small-scale agriculture on steep slopes, very limited infrastructure throughout the rugged and isolated valleys, and few links to the modern economy. In 2004, the average annual income of urban residents was CNY5,928 (\$716.8 equivalent) while the average annual per capita income of the rural population (approximately 84% of the QM population) was only CNY1,050 (\$ 127 equivalent), or 35% of the poverty level on a \$1/day basis. The project preparatory TA (PPTA) will design and investment project for loan and grant financing to improve biodiversity conservation and reduce land degradation in the QM. It will feature commercially sustainable biodiversity conservation and ecotourism at Louguantai, and improved land management within the wider QM range. It will include (i) an assessment of the enabling conditions for the Louguantai biodiversity conservation and tourism site, including policies, regulations, and incentives; (ii) appropriate institutional arrangements for the Project, including for capacity building; (iii) design of the Louguantai facility and core area (approximately 458 square kilometers) as a commercial venue for biodiversity conservation, scientific display and research, and ecological and cultural tourism; and (iv) monitoring and evaluation system to gauge the impact of conservation. Project interventions feature community-based programs in rural areas, and public-private partnerships, especially in tourism.</p>			

### B. Poverty Analysis

#### Targeting Classification: Environment

#### What type of poverty analysis is needed?

Poverty analysis will comprise the following: (i) rural and urban consultations/surveys in the main ecosystems of the QM range; (ii) participatory focus group discussions with vulnerable groups such as women, migratory groups, herders facing a grazing ban, illegal loggers facing a logging ban, and people living on the forest slope margins to determine the linkage between income, poverty, and non-income poverty and the environment, and their options for the future; (iii) design of interventions in policy/planning, regulations, institutions and physical investments to address conservation and tourism, water resources including conservation and pollution, and sustainable livelihood activities. Public-private partnerships will be important, especially in tourism.

**C. Participation Process**

**Is there a stakeholder analysis?**  Yes  No

A brief stakeholder analysis was conducted during TA fact-finding and the roles of the key stakeholders were identified and agreed upon in the signed Memorandum of Understanding. Based on detailed discussions and site visits, the Executing Agency will be the Foreign Loan Support Management Office of the Shaanxi Provincial Development and Reform Commission. The leading group will be chaired by the responsible vice-governor, and will coordinate and enlist the support of involved and concerned agencies to ensure smooth implementation. The group will also play its role as a steering committee. Headed by the director general of the Provincial Planning and Reformation Commission (PDRC), the standing office will be set up under the leading group. The project management office (PMO) will be established with experts on plant and animal biology, economics, finance, tourism, management, marketing, legal and regulatory aspects, information technology, and other needed fields. The PMO will engage 8-10 permanent staff and link closely to the existing group of the Qinling Botanical Garden. An expert panel (EP) will provide technical guidance to the PMO and the consultant team. The EP will comprise 6-8 senior scientists and experts in integrated ecosystem management, biodiversity conservation, ecotourism, geographic information systems, natural resources management, and business management from relevant companies, national and provincial universities, and institutes. Panel members will be paid a lump sum honorarium. In addition, the arrangements in SP for implementing the ongoing PRC-GEF Partnership on Land Degradation will provide an opportunity to build capacity in project planning and implementation. During the TA those responsible for preparing the full project proposal will consult fully with the above institutions, and make field visits to potential project pilot/demonstration sites. The project components will be designed and reviewed through a process of stakeholder consultation involving the concerned authorities and technical agencies at the SP, country and city and local government levels, as well as concerned nongovernment organizations and private sector bodies. A series of informal and formal consultations will be held with representatives of the key project beneficiaries (including rural households within the project area) to take into consideration their concerns and aspirations.

**Is there a participation strategy?**  Yes  No

To strengthen the design, the EP will provide technical guidance to the PMO. In addition, participatory focus group discussions will be held with the community, including vulnerable groups, and with private sector corporations to determine their interest and capacity to participate in the project.

**D. Gender Development**

**Strategy to maximize impacts on women:**

**Gender analysis:** Gender roles are determined by a combination of cultural factors, occupations, environmental conditions, education levels and employment opportunities. During TA implementation, women's roles in the proposed project activities, including in institutional capacity building will be assessed. The need for gender-specific groups, or other measures will be assessed.

**Gender and development plan:** The project will not have significant negative impacts on women, but a gender plan will need to be developed, given the fact that local staff have low gender sensitivity and lack the knowledge and skills for gender analysis and planning. The gender plan will ensure equal participation of women.

**Has an output been prepared?**  Yes  No

This will be prepared during the PPTA phase.

### E. Social Safeguards and Other Social Risks

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
<b>Resettlement</b>	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	At Louguantai, the Government has already completed or is nearing completion of the resettlement of 70 households, and so resettlement may not be required in the project. Further involuntary resettlement implications will need to be addressed during the TA.	<input type="checkbox"/> Full <input checked="" type="checkbox"/> Short <input type="checkbox"/> None
<b>Affordability</b>	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	Suitable pricing arrangements for water and other resources, including lease options/private investment options in conservation, and tourism to ensure sustainable use will be studied. Project work in this area will ensure the poor are not adversely affected. The TA will examine this issue.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Labor</b>	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	There may be some shifting of locations related to new economic opportunities, and changes in livelihood activities as restrictions will apply to conserve ecosystem functions. Any such plans will incorporate mitigating measures.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Indigenous Peoples</b>	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	In the QM area there are Hui, Man, Mongolian, and Korean minorities, with a total minority population of about 36,000 (0.01% of the QM population). In the county where Louguantai is located, the total minority population is about only 1,328 people. This is not anticipated to be an issue of significance in project design.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Other Risks and/or Vulnerabilities</b>	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	The project will require adjustment of livelihood activities and land use to suit long-term and sustainable ecosystem management. The Government will build consensus to ensure smooth implementation of the project.	<input checked="" type="checkbox"/> Sustainable livelihood plan <input type="checkbox"/> No

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

<b>Item</b>	<b>Total Cost</b>
<b>A. Asian Development Bank (ADB) Financing<sup>a</sup></b>	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	209.0
ii. Domestic Consultants	156.0
b. International and Local Travel	37.0
c. Reports and Communications	10.0
2. Equipment <sup>b</sup>	5.0
3. Training, Seminars, and Conferences	
a. Facilitators	5.0
b. Training Program	10.0
4. Surveys	7.0
5. Miscellaneous Administration and Support Costs	5.0
6. Representative for Contract Negotiations	6.0
7. Translation and Interpretation	5.0
8. Contingencies	45.0
<b>Subtotal (A)</b>	<b>500.0</b>
<b>B. Government Financing</b>	
1. Office Accommodation and Transport	50.0
2. Remuneration and Per Diem of Counterpart Staff	75.0
3. Others (maps, surveys, data collection, translations)	75.0
<b>Subtotal (B)</b>	<b>200.0</b>
<b>Total</b>	<b>700.0</b>

<sup>a</sup> Financed by ADB's technical assistance funding program.

<sup>b</sup> Includes 2 computers, printer, facsimile machine, and copier.

Source: ADB estimates

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The technical assistance (TA) will be carried out over 8 months — March 2006 to November 2006. The Asian Development Bank (ADB) will finance 50 person-months of consulting services: 11 international and 39 domestic. The consultants will work as a team under the overall leadership of the international team leader/biodiversity conservation and tourism specialist. The long-term goal is to improve biodiversity conservation, increase tourism, and reduce land degradation. The direct purpose of the project is to design a demonstration investment project for establishing a commercially sustainable initiative for biodiversity conservation and tourism at Louguantai. The Government's feasibility study and data provided by Shaanxi province (SP) will be the initial basis for the team's work.

**1. Team Leader/Biodiversity Conservation and Tourism Specialist** (international, 6 person-months)

2. The specialist will lead the team of international and domestic consultants, coordinate the work of the members, and ensure close cooperation of the team with the Government and other stakeholders. The team leader will take overall responsibility for the quality and consistency of all TA products (in accordance with ADB's policies and standards), and will manage the financial and technical aspects of TA operations. The team leader will carry out the following technical responsibilities:

- (i) In close coordination with the consulting team, make a comprehensive assessment of the mandates, roles, and responsibilities at the proposed Louguantai site, including formulating of recommendations for institutional capacity building, eliminating of conflicting and/or overlapping responsibilities, introducing of bottom-up consultative and participatory processes involving civil society, and coordinating agencies in formulating and implementing arrangements for the project.
- (ii) Take the lead in the project design, including (a) review of available information and relevant official documents, (b) the scope, (c) review and discussion of relevant subprojects, and (d) involvement of counterpart staff and/or contracted design institutes in doing additional studies.
- (iii) In coordination with the team and the Government, formulate a commercial biodiversity conservation and tourism investment project for Louguantai (approximately 458 square kilometers)<sup>10</sup>, including (a) prioritization of investment activities; (b) implementation program; (c) costs and financing requirements; (d) implementation arrangements and resources for operation and maintenance (O&M) and cost recovery; (e) financing plans and mechanisms for revenue raising activities, including tourism, and other sales; (f) appropriate marketing and promotion/branding arrangements; (g) distribution of profits; and (h) contract packages, procurement arrangements, work schedules, and arrangements for disbursing funds from different sources.
- (iv) Advise on the design features and management systems for the proposed Louguantai facility in the context of best international standards of commercial presentation and management of wildlife gardens, parks, and tourism.

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<sup>10</sup> Design of the core area investment at Louguantai, inclusive of best international practices for business management and strategy for different market segments, identification of species of global importance, habitat restoration, scientific research and displays, small zoo/animal hospital/breeding center, ecological and cultural tourism, species protection (animals, birds, and plants), laboratories, conservation education, sewage and waste treatment; access roads (approx. 55 km) and cableway (approx. 1.2 km), riverbank protection (approx. 2.6 km), power plant, telecommunications, vehicles, equipment, and related facilities.

- (v) Assess the potential of Louguantai in terms of its major appeal to visitors and scientists. Identify the major revenue drivers (key animals, plants, experiences) and advise on how to best exploit the value of these assets on a long-term basis.
- (vi) Prepare an overview of the necessary preconditions for the creation of an international curatorial program to propagate captive species for reintroduction and the necessary methodologies accepted worldwide, and other factors that would need to be considered in formulating an acceptable standard.
- (vii) Develop technical and marketing/branding, merchandizing and promotional recommendations to implement at Louguantai, based on experience in other major tourism sites in SP (e.g., terracotta warriors, museums, zoos, other cultural and tourism sites) and other wildlife/tourism facilities in the People's Republic of China (e.g., at Wolong in Sichuan province), and based on best international practices.
- (viii) Establish a mechanism to monitor the effectiveness of the proposed replication strategy, incentive measures and instruments (e.g. hypothecation, trust funds, payments for environmental services, certification) within and beyond project boundaries.<sup>11</sup>
- (ix) Formulate an appropriate monitoring and evaluation (M&E) program to be implemented during the project, and make recommendations for community participation.
- (x) Supervise and consolidate the preparation of terms of reference for any technical, environmental, social, or other studies to be done during the project.
- (xi) Build the technical and project design capacity of counterpart staff and design an ongoing exercise for implementation during the project.
- (xii) Take primary responsibility for ensuring that inception, midterm, draft final, and final reports are submitted on schedule and meet the quality requirements of ADB and the Government.

**2. Project Economist/Financial Analyst** (international, 5 person-months)<sup>12</sup>

3. The consultant, in conjunction with the team and in line with ADB's *Guidelines on the Economic Analysis of Projects* and *Guidelines for the Financial Governance and Management of Investment Projects*, will be responsible for (i) economic analysis and (ii) financial evaluation, including financial analysis and financial management assessment. The specific tasks are as follows:

- (i) Undertake, with the assistance of the domestic economist/financial analyst, economic analysis of the project, including the rationale, macroeconomic and sector context, project alternatives, demand estimates, cost estimates and least-cost options, use of shadow prices, sensitivity analysis, risk analysis, environmental sustainability, distributional analysis, benefit M&E and overall economic assessment, including calculation of the economic internal rate of return.
- (ii) With the domestic economist/financial analyst, assess financial viability and financial management capacity. Include developing cost estimates, financing plan, and tests of the financial viability of all proposed components and the overall Louguantai facility; a financial assessment of the executing agency/implementing agency (EA/IA) to determine the level of financial management capacity for implementing the loan project and the priorities for postproject sustainability. Identify weaknesses and risks in the financial management arrangements that can be addressed in project design

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<sup>11</sup> For example, inclusion of sustainably harvested medicinal /health product/cosmetic product herbs into existing PRC certification schemes.

<sup>12</sup> May be split into two positions, if required, to adequately cover all aspects of the economic and financial analyses.

and be supported through capacity building. Covered, among others, are these areas: planning and budget control, financial and management accounting, cost accounting, internal control and audit, and data processing.

- (iii) With other team members, contact the main private sector tourism operators in SP to assess their interest, and identify their potential roles in the project to maximize private sector involvement in conservation and tourism.
- (iv) Assist the team leader with (a) prioritizing major components, activities, and inputs; (b) the overall implementation program; (c) determining costs and funding requirements for the overall project; (d) management and implementation arrangements and resources for operation and maintenance; (e) mechanisms for revenues and cost recovery through pricing policy; and (f) contract packages, procurement arrangements, work schedules, and arrangements for disbursing funds from different sources.
- (v) Assist the domestic economist/financial analyst to analyze trends and outlook for potential project activities/sectors, including tourism.

### 3. **Economist/Financial Analyst** (domestic, 7 person-months)<sup>13</sup>

4. The consultant will work with the international project economist/financial analyst to undertake the following tasks:

- (i) Prepare cost estimates for the project, including the ADB loan financing and counterpart fund requirements, the baseline costs, and the Global Environment Facility (GEF)-related incremental cost analysis and matrix.
- (ii) Assist with the relevant analyses of the Louguantai facility, farm household and commercial activity models, requirements for financial services including credit, economic and financial viability, and the economic, financial, and fiscal sustainability of the proposed project.
- (iii) Prepare any additional work and studies as required by the team leader or the international project economist/financial analyst, including inputs on the trends and outlook for tourism, other rural industries, participation, gender, and sustainable livelihood plans, and cost-benefit analysis.
- (iv) Assess the EA/IA financial management system, including budgeting, accounting, financial reporting, internal control, cash flow management, and internal and external audit arrangements. Recommend specific measures to be built into the project design or implementation arrangements to address the issues and weaknesses identified. Determine if any additional capacity building should be considered to strengthen EA/IAs financial management capacity.
- (v) Design a financial reporting system suitable for the project. Recommend appropriate format, content, timing, and consolidation procedures for financial statements, which ensure disclosure of full accountability for the use of funds from all sources, and adequate disclosure of all material information of implementation activities.
- (vi) Discuss and confirm with the central and provincial governments as well as concerned agencies the onlending/relending arrangements under the project.

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<sup>13</sup> May be split into two positions, if required, to adequately cover all aspects of the economic and financial analyses.

- (vii) Assess the debt repayment mechanism of the project, and identify risk factors associated with the debt service capacity of EA/IAs and recommend mitigating measures.
- (viii) Identify suitable disbursement arrangements for the use of ADB loan proceeds and other financing resources, covering conditionality of disbursement and use of different disbursement procedures.

**4. Biodiversity Conservation Specialist** (domestic, 7 person-months)

5. The consultant will prepare a comprehensive report on Qinling Mountain (QM) range biodiversity, including background, problems, opportunities and challenges, national and global significance (e.g., as described in the World Wildlife Fund and the World Conservation Union documents); and an overview of the ecological function zoning of the targeted area. The following detailed tasks will be undertaken:

- (i) Review biodiversity conservation in national and provincial programs and plans in the QM, and international and bilateral development projects in the PRC;
- (ii) Review relevant United Nations conventions, national and provincial policies, regulations, and laws for biodiversity conservation.
- (iii) Prepare a strategic plan of biodiversity conservation and sustainable utilization, set logistic linkages of initiatives to be undertaken in the relocated area to the core protection area, eventually to the entire QM.
- (iv) Advise on developing facilities in the relocated area, including introducing species, integrated management of species, science education to the public, building habitats for animal species.
- (v) Develop guidelines/manuals for a QM biodiversity survey, database establishment, information system development.
- (vi) Advise on national best practices for an ecotourism strategic plan, particularly on commercially sustainable biodiversity management.

**5. Business Development and Marketing Specialist** (domestic, 4 person-months)

6. The consultant, in coordination with the economics/finance and other specialists, will be responsible for the following tasks: (i) prepare a business plan and analyze the risks for the Louguantai facility to determine its commercial viability; (ii) examine the overall environmental, land degradation, scientific and livelihood objectives and plans for the project, and adjust the business plan to derive a viable strategy and marketing plan for tourism, tours, sales, hospitality, and other commercial enterprises; and (iii) make recommendations on any proposed aspects of the business plan that may not be viable.

**6. Tourism Expert** (domestic, 6 person-months)

7. The consultant will undertake a comprehensive analysis of national, provincial, municipal, and neighboring nature reserves, and predict the demand and markets in the proposed Louguantai biodiversity conservation and tourism facility. Working with other team members, the consultant will develop a detailed plan for tourism, including strategy, public education, marketing, and branding; and will work with tourism officials in the SP government, existing ecotourism venues, and other tourism-related companies in SP, with respect to developing a long-term integrated approach to tourism within the QM.

## 7. Social Development Specialist (domestic, 3 person-months)

8. The consultant will (i) give a background review of the project, the nature of the proposed interventions, and the people likely to be affected; (ii) using the initial poverty and social assessment, conduct poverty and social analysis in accordance with ADB's guidelines and assess how the proposed project will help improve people's incomes and livelihood; (iii) in collaboration with the economics/finance consultants, estimate (a) the number of project beneficiaries by area, occupation, and income level (poor, low, medium, and high); (b) the number of adversely affected people by type of impact; and (c) the poverty impact ratio; (iv) specify how the project will improve benefits for local people by income group; and (v) recommend measures to enhance benefits and minimize adverse impacts, particularly for the poor and ethnic minorities. Other duties are as follows:

- (i) Prepare socioeconomic and poverty profiles for the project areas, collecting data through statistical records, field surveys and key informant interviews and participatory community appraisal techniques. The data and profiles will be sufficiently comprehensive to serve as the baseline for socioeconomic benefit monitoring. Assist with preparing the performance M&E systems, including a reporting format and how to measure indicators.
- (ii) Assess ethnic minorities, gender issues, vulnerable groups and recommend appropriate measures to address impacts and promote development opportunities during project construction and operation. If the social analysis indicates that the project will affect ethnic minorities significantly or adversely, prepare an ethnic minority development plan as set out in ADB's *Indigenous People's Policy* (1998). Cover all necessary actions to determine the participation of key stakeholders, the need to involve minority peoples in the planning, monitoring, and implementation of the project, the need for involving nongovernment organizations in planning, monitoring, and implementing the project; the need for a participation strategy and framework as part of the project; and future guidelines for contractors and others involved with minority communities.
- (iii) If the project is gender sensitive, formulate strategies and an action plan to enhance project benefits and improve gender equalization.
- (iv) Identify potential negative impacts in accordance with ADB's involuntary resettlement policy. Assist the EA to prepare a resettlement plan for any subproject entailing land acquisition, house relocation, and loss of other assets. Conduct resettlement household surveys to ensure adequate understanding of social impacts. Quantify the types and degree of impacts on affected people.
- (v) Review the local government's policy, strategy and programs for poverty reduction and regional economic development, for the project areas.
- (vi) Analyze how the proposed project will be consistent and coordinate with the government development programs. Consult with local government and communities to identify development initiatives that could complement the proposed ecosystem management project, e.g. alternative livelihood programs targeting the poor and ethnic minorities, and identify possible sources of funding for the initiatives.
- (vii) Assist the EA to establish consultation and participatory processes that will continue throughout project design, construction, and operation. Identify stakeholders

and consult representatives so that their needs and demands can be considered for incorporation into the project or as parallel initiatives. Prepare a public participation and consultation status report and plan for project implementation, which will be managed by the EA.

- (viii) Complete the work by the midterm report. Depending on the outcome of the work, advise on whether additional consulting services are needed during the TA, or additional work by the Government or ADB.

#### **8. Environmental Specialist** (domestic, 2 person-months)

9. The specialist will (i) review and update the environmental assessment reports (EARs) for various project interventions prepared by the SP Government; (ii) conduct supplementary studies, in conjunction with the Government and the international consultants, to update and improve the EARs, as necessary, to make them conform with ADB standards and guidelines; (iii) prepare the initial environment evaluation (IEE) and environmental impact assessment; circulate the summary IEE; disclose the summary to the public; and prepare the environment management plan, budget, and environmental monitoring plan, in accordance with ADB's guidelines; (iv) conduct and document public consultation activities; and (v) prepare relevant sections of reports.

#### **9. Civil Engineer** (domestic, 4 person-months)

10. The civil engineer will review the project feasibility study, focusing on physical infrastructure, and determine if any additional studies may be needed for project preparation — design layouts, technical calculations, and cost estimates and contingencies. Other duties will include the following:

- (i) Review the design criteria and verify technical feasibility and appropriateness in terms of the project needs for safety and efficiency, and to minimize environmental impacts.
- (ii) Examine the design and management needs for all engineering works including access roads, and to accommodate tourists, cable car, animals, plants, resident staff; and all other facilities, waste disposal, riverbank protection, etc., needed for a modern facility focused on conservation and tourism at Louguantai, and for other sites as needed.
- (iii) Advise on whether the existing designs and planned infrastructure comply with recommendations, on ways to make improvements to maximize the commercial sustainability of the project, and on the welfare and environmental standards needed.
- (iv) Work with the other consultants to cost the necessary work as an integral part of the business plan; and perform other duties as required by the team leader.

#### **10. Data Coordinator** (domestic, 6 person-months)

11. The consultant will collate and coordinate all required data and maps for the team. The work will involve (i) liaising with all agencies to ensure relevant data is gathered; (ii) identifying gaps and undertaking focused surveys/data collection as necessary; (iii) preparing maps and data sets as needed; and (iv) performing other duties as required in coordination with the team leader.