Document of

The World Bank

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Report No: 30004-CHA

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$100 MILLION

TO THE

PEOPLE'S REPUBLIC OF CHINA

FOR AN

INNER MONGOLIA HIGHWAY AND TRADE CORRIDOR PROJECT

January 13, 2005

Transport Sector Unit
East Asia and Pacific Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective May 2004)

Currency Unit = RMB
RMB 1.00 = US$0.12
US$1.00 = RMB8.28

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ABIM	Audit Bureau of Inner Mongolia Autonomous Region
ADT	Average daily traffic
BRFT	Border Roads for Trade
CAS	Country Assistance Strategy
CNAO	China National Audit Office
CQ	Selection based on consultants' qualifications
CTT	Cargo Transfer Terminal
E & M	Electro-mechanical
EAP	Environmental Action Plan
EIA	Environmental Impact Assessment
EIRR	Economic internal rate of return
EMDP	Ethnic minority people's development plan
EMP	Environmental monitoring plan
FSL	Fixed-spread loan
HDM-III	Highway Design and Maintenance Model
HMH	Hailar–Manzhouli Highway
HMPMO	Hai–Man Project Management Office
ICB	International competitive bidding
IMCD	Inner Mongolia Communications Department
IMFB	Inner Mongolia Finance Bureau
IST	Institutional Strengthening and Training
LCS	Least-Cost Selection
MBD	Model bidding documents
MOC	Ministry of Communications
MOF	Ministry of Finance
N.B.F.	Not Bank-financed
NCB	National competitive bidding
QBS	Quality-based selection
QCBS	Quality- and cost-based selection
RAP	Resettlement action plan
SBD	Standard bidding documents
SEPA	State Environmental Protection Agency
SFB	Selection under a fixed budget
SOE	Statement of expenditure
VOC	Vehicle operating costs
VSL	Variable-spread loan

Vice President:	Jemal-ud-din Kassum
Country Manager/Director:	David R. Dollar
Sector Manager:	Jitendra N. Bajpai
Task Team Leader:	Supee Teravaninthorn

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China
Inner Mongolia Highway and Trade Corridor Project

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Maps

IBRD 33237

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CHINA

INNER MONGOLIA HIGHWAY AND TRADE CORRIDOR

PROJECT APPRAISAL DOCUMENT

EAST ASIA AND PACIFIC

EASTR

Date: January 13, 2005	Team Leader: Supee Teravaninthorn
Country Director: David R. Dollar	Sectors: Roads and highways (90%);Sub-national government administration (10%)
Sector Manager/Director: Jitendra N. Bajpai	Themes: Export development and competitiveness (P);Rural services and infrastructure (P);Municipal governance and institution building (P);Trade facilitation and market access (P)
Project ID: P068752	Environmental screening category: Full Assessment
Lending Instrument: Specific Investment Loan	Safeguard screening category: Limited impact

Project Financing Data

[X] Loan [ ] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 100.00
Proposed terms: VSL

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER	162.66	0.00	162.66
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT	2.51	97.49	100.00
Total:	165.17	97.49	262.66

Borrower:
People's Republic of China
China

Responsible Agency:
Inner Mongolia Communications Department
Hohhot
Inner Mongolia
China

Estimated disbursements (Bank FY/US$m)									
FY	2006	2007	2008	2009	2010	0	0	0	0
Annual	15.00	20.00	25.00	25.00	15.00	0.00	0.00	0.00	0.00
Cumulative	15.00	35.00	60.00	85.00	100.00	100.00	100.00	100.00	100.00

Project implementation period: Start March 1, 2004 End: December 31, 2009
Expected effectiveness date: April 18, 2005
Expected closing date: June 30, 2010

Does the project depart from the CAS in content or other significant respects? ***Ref. PAD A.3***	[ ]Yes [X] No
Does the project require any exceptions from Bank policies? ***Ref. PAD D.7***	[ ]Yes [X] No
Have these been approved by Bank management?	[X]Yes [ ] No
Is approval for any policy exception sought from the Board?	[ ]Yes [X] No
Does the project include any critical risks rated "substantial" or "high"? ***Ref. PAD C.5***	[ ]Yes [X] No
Does the project meet the Regional criteria for readiness for implementation? ***Ref. PAD D.7***	[X]Yes [ ] No

Project development objective ***Ref. PAD B.2, Technical Annex 3***
The main objective of the project is to maximize the use of transport infrastructure as a mean to promote international trade of Inner Mongolia in general, and Hulunbeir League in particular. Specifically, it will help speed up the general development of Hulunbeir League, preparing it to cope with the increasingly important role the central government has assigned to it to be the country's main contact point for trading with Russia.

Project description *[one-sentence summary of each component]* ***Ref. PAD B.3.a, Technical Annex 4***
(a) Construction of about 177 km of the Hailar-Manzhouli Highway (HMH) which is one of the most important trade corridors between China and Russia;

(b) Border Roads for Trade (BRFT) component consisting of five local roads has been designed to connect the northeastern hinterland of China to the international border crossings to promote trade with Russia and Mongolia.

(c) Trade facilitation component consists of the development of cargo transfer terminal (CTT) and a diagnostic study on measures to promote cross-border trade between China and its neighbors.

(d) Institutional strengthening and training component designed to improve the efficiency and sustainability of road sector management in Inner Mongolia and strengthen institutional and policy development, focusing on logistics arrangements with neighboring countries.

Which safeguard policies are triggered, if any? ***Ref. PAD D.6, Technical Annex 10***
Environmental Assessment (OP/BP/GP 4.01)
Natural Habitats (OP/BP 4.04)
Involuntary Resettlement (OP/BP 4.12)
Indigenous Peoples (OD 4.20, being revised as OP 4.10)

Significant, non-standard conditions, **if any**, for:
Ref. PAD C.7
Board presentation:
N/A

Loan/credit effectiveness:
N/A

Covenants applicable to project implementation:
Standard implementation covenants on safeguard, procurement and financial management.

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

The strategic objectives for China according to the World Bank's Country Assistance Strategy (CAS) of November 2002 are to:

- Improve the investment climate;
- Accelerate the transition to a market economy;
- Address the needs of disadvantaged groups and underdeveloped regions; and
- Facilitate a more sustainable development process.

In this strategic context, the CAS recommends Bank intervention in the following areas of the transportation sector:

- Financing economic infrastructure in key growth corridors, including seaport and external trade corridors and corridors serving western provinces; and to reduce inter- and intra-regional development disparities

- Financing infrastructure to serve poorer communities, thereby improving productivity in rural areas

- Facilitating the development of institutions necessary for managing and planning the infrastructure network in China's rapidly growing market economy.

Exports have played an important role in China's strong economic growth in recent years. However, because internal transport costs are high, coastal provinces have benefited more from this growth than have inland provinces. Costs are high in part because of distance, but also because of inefficient or inappropriate pricing and weak intermodal logistics. If inland provinces are to have a meaningful share of China's booming export trade, access to these provinces must improve, and constraints on the transportation of goods must be overcome.

The government's transportation policy emphasizes improving access for inland provinces and fostering the development of trade through lower transport costs and improved logistics services. Investment in basic transportation infrastructure and in measures to facilitate the movement and handling of goods is a prerequisite for the promotion of trade. This is particularly true for China's trade with Russia, in which Hulunbeier League in Inner Mongolia, on China's northeastern border with Russia and Mongolia, plays a key role. The city of Manzhouli in Hulunbeier has been China's land port to Russia, Mongolia, and beyond for the past 100 years.

2. Rationale for Bank involvement

The roles of the cities of Manzhouli and Hailar have increased in importance as trade between China and its neighbors expands in this era of trade liberalization and globalization. Border trade between China and Russia has been growing at about 20 percent per year for the past 4–5 years, although from a relatively low base. Trade statistics in 2002 showed about 10 million tons of freight moved between the two countries—9 million by rail and 1 million by road. At estimated growth rates of 20 percent for the next five years and 10 percent for the subsequent five years, the trade volume is expected to reach 30 million tons by 2009 and 42 million tons by 2013. With such a significant increase in trade volume expected, and railways badly overburdened, serious consideration must be given now to investment in transport links and facilities to move and handle cargo in Hulunbeier.

Manzhouli, as a result of the blossoming of trade between China and Russia, has become the second-largest international land port in China after Shenzhen (near Hong Kong). Despite its importance, it is essentially a border checkpoint and has no cargo terminal except for some private facilities belonging to

large importers and exporters. Small shippers and traders that do not have their own premises need common loading and unloading facilities.

Furthermore, Russian trucks, which carry about 90 percent of cargo crossing the border by road, are not permitted in Chinese territory beyond Hailar; cargo for destinations beyond Hailar has to be carried by Chinese trucks. A terminal for transferring cargo between Russian and Chinese trucks and between modes (road and rail), and for distributing and consolidating cargo in the Hulunbeier area, is necessary for promoting trade.

Trade and Transport in Hulunbeier, Inner Mongolia

Hulunbeier has a total land area of 253,000 sq. km (80 percent the size of Vietnam), but with a population of only 2.7 million, it is one of the most thinly populated areas of China. However, it is strategically important because of its long border with Russia (1,048 km) and Mongolia (676 km). It has five border crossings with Russia and two with Mongolia. All but one of the border crossings are seasonally open with bilateral arrangement. The exception, the Manzhouli crossing, was upgraded in 1996 to function as an international land port. Currently about 60 percent of trade between China and Russia passes through the land port of Manzhouli. Russian trucks are allowed to travel about 200 km into China from Manzhouli to Hailar (capital of Hulunbeier League), while Chinese trucks are allowed to travel 500 km into Russia from the Zabaykal'sk checkpoint across from Manzhouli. The Russians and the Chinese recently have negotiated a reciprocal deal and the Chinese have agreed to prepare road and freight transfer facilities in the next 1–2 years so that Russian trucks can travel 500 km into China. Imports from Russia to China consist of mainly raw materials— timber and minerals—while exports to Russia are agricultural and consumer goods. Hulunbeier's economy relies heavily on this foreign trade, which makes up about 40 percent of Inner Mongolia's foreign trade. The following table summarizes a few key features of Hulunbeier's economy.

	China	Inner Mongolia	Hulunbeier	Inner Mongolia Compared to China	Hulunbeier Compared to Inner Mongolia
Land area (1,000 km2)	9,600	1,183	253	12% (country's third-largest)	21%
Population (million)	1,285	23.78	2.68	2% of total (ranks 23rd)	11%
Population density (pop/km2)	134	20	11	Ranks 28th	
GDP per capita (RMB in 2002)	8,184	7,230	7,051	Ranks 15th (12% below national average)	Close to Inner Mongolia average
Highway network (km)	1,820,000	72,673		Has 4% of country's network	
Road density (km/1,000km2)	190	61.4		One-third national average	
Total import and export (RMB billion)		24.64	10.68		Contributes 43% of foreign trade of Inner Mongolia
Proportion of import and export to GDP		14.3%	56.6%		Economy relies heavily on foreign trade.

The CAS identifies the strengthening of regional integration and competitiveness through a well-functioning transportation system as a key objective in the transport sector. The project will help meet the sector-related CAS objectives of facilitating trade (domestic and international), improving regional and market integration, and fostering the development of western regions, whose development lags behind

that of coastal areas. One of the critical features of the proposed project is the expansion of the transport route between China and Russia. As a multilateral organization, the Bank has the unique capacity to liaise with other countries across the border and is in a good position to advise China on this critical undertaking.

3. Higher-level objectives to which the project contributes

Besides investment in transport links to Russia and Mongolia and expanding highway network capacity in the relatively poor northeastern corridor of Inner Mongolia, the main challenge of the project is to strengthen institutional capacity and policy development capability in logistics for trade between China on one hand and Russia and Mongolia on the other. Technical assistance will be provided to help in setting a foundation for further improvement in trade in Inner Mongolia, particularly to help Hulunbeier League plan, facilitate, and expand international trade.

The proposed project is designed with the clear objective of maximizing the use of transport infrastructure to promote international trade through Inner Mongolia in general and Hulunbeier League in particular. It will help accelerate the general development of Hulunbeier League, preparing it to cope with the increasingly important role the central government has assigned to it to be the country's main contact point for trading with Russia. In so doing, the project aims to: (i) improve the capacity of transport infrastructure and network planning to handle the significant increase in the volume of international freight traffic along China's northeastern border; (ii) develop a freight transfer and trade facilitation program to meet the growing demand for cross-border trade; and (iii) provide technical assistance to the Inner Mongolia Communications Department (IMCD) and Hulunbeier to build their capacity to plan, facilitate, and manage increasing demand for transportation of international trade traffic.

B. PROJECT DESCRIPTION

1. Lending instrument

The project will be financed through three sources of funds: central government (Ministry of Communications [MOC]) budget transfers, local financing from Inner Mongolia, and the Bank loan. The Bank will finance the project through a specific investment loan. The borrower has selected the LIBOR-based US Dollars Single Currency Loan with variable spread rate (VSL). The borrower had evaluated the various options offered by the Bank and had determined that this choice would provide the Borrower the desirable flexibility in the management of foreign currency obligations. VSL repayment terms will be governed by standard country terms.

2. Program objective and phases

Not applicable.

3. Project development objective and key indicators

Development objective. The main objective of the project is to sustain and promote the development of cross-border trade between China on one hand and Russia and Mongolia on the other by improving transport infrastructure and logistics. These improvements, in turn, will lower transport costs, increase income from external trade, and raise incomes in Inner Mongolia, the country's third-largest province and one of the poorest provinces of the western region.

Key performance indicators. The principal outcome or impact indicators selected for monitoring progress in achieving the project development objective are:

- *For the Hailar–Manzhouli Highway (HMH) and the Border Roads for Trade (BRFT) components—*

  — Travel time (projected to be reduced by at least 50 percent after HMH completion)

— Traffic volume served by the corridor, especially of trade cargo, projected to increase by 100 percent after HMH completion

— Share of trade cargo transported by highway will be increased as railway will be dedicated for transportation of petroleum imported from Russia. Timber, mineral products and other general cargo will have to be offloaded from the overburdened rail mode of transport to road, and is projected to be at least 10 percent of total trade volume

- *For the Cargo Transfer Terminal (CTT)*— volume of cargo passing through the CTT (projected to increase by factor of four by 2008).

- *For the Institutional Strengthening and Training (IST) component*—improvement in efficiency and capacity of local governments to manage the HMH and BRFT infrastructure facilities and promote border trade, measured in numbers of staff trained who remain in the jobs for which they received training (projected at least half those trained).

Annex 3 gives detailed information about indicators and baselines.

4. Project components

The project includes the following components:

- *Component 1—Hailar–Manzhouli Highway.* Expansion of highway capacity by upgrading or constructing about 177 km of HMH. The component is estimated to cost about US$172 million, of which US$70 million will be financed by the World Bank;

- *Component 2—Border Roads for Trade.* Upgrading and rehabilitation of about 413 km of the highway network, sections identified either as key links for international trade facilitation at smaller border crossings with Russia and Mongolia, or as critical missing links in the highway network. The component aims to improve transport access to four other seasonal land ports between China and Russia and China and Mongolia. The component is estimated to cost about US$51 million, of which US$18 million will be financed by the Bank.

- *Component 3—Cargo transfer terminal and trade facilitation program.* Development of facilities and trade regime designed mainly for China's import and export trade with Russia and Mongolia, but also meeting the requirements of potential trade in transit shipped through Chinese seaports to other countries. The primary purpose of the CTT is to facilitate the consolidation, distribution, and trucking of cargo. The component is composed of: (i) construction of a transfer station in Hailar housing facilities for transferring cargo between transportation modes (rail and road) and between Chinese and Russian trucks as well as for warehousing; and (ii) carrying out of a diagnostic study on measures to promote cross-border trade between China and its neighbors. The study could later form a foundation to further improve a process for the quick and convenient inspection and clearance of cargo by customs and quarantine authorities; and to develop an internationally accepted trade documentation and practices for importers and exporters, transportation carriers, banks, and insurance companies. The component is estimated to cost about US$2.6 million, and will be financed locally.

- *Component 4—Institutional strengthening and training.* Technical assistance and training program aiming to improve the trade logistics planning, trade promotion, and cargo terminal management, as well as project management, environmental monitoring, and supervision of highway construction. The training program will be designed to include courses and study tours related to logistics operations and trade facilitation to benefit the relevant offices of Hulunbeier government. The component is estimated to cost about US$1.2 million and will be financed by the Bank.

Project outputs. The project will produce the following outputs to meet the development objectives:

- Increased transport capacity and better market integration in China's second-largest land port corridor, Hailar–Manzhouli, in northeastern Inner Mongolia;
- More external trade with neighboring countries through investment in the BRFT component;
- Improved capacity of the road network infrastructure through the provision of the CTT in Hailar. This includes facilities and services which will facilitate the conduct of trade and the movement of cargo by road between the countries;
- Enhanced public sector management of road and CTT infrastructure in Hailar by strengthening institutional and management measures; and
- The diagnostic study on measures to promote cross-border trade will assist China in developing a trade regime and documentation compatible with international trade practices.

5. Lessons learned and reflected in project design

OED's recent assessment of the Bank's transport portfolio in China highlights a high level of client satisfaction with investments in the highway sector. The overall performance of the Bank's highway portfolio in China has been satisfactory; nevertheless, a number of issues have arisen during project implementation. These include a lack of coordination among organizations and levels of government that has been detrimental to implementation of the policy agenda, especially for improving road safety, and issues with infrastructure design as well. Two ongoing Bank-financed highway projects in Inner Mongolia, the Inner Mongolia component of the Tri-provincial Highway Project, and the Inner Mongolia Highway Project, have provided the following relevant lessons, which the design of the proposed project has taken into account:

- *Client ownership and coordination among various levels of government units must improve.* The task team ensured that all relevant government units, including Hulunbeier government, IMCD, and other organizations involved, participated in project preparation to foster a sense of ownership as well as create continuity for implementation.
- *Rushing the engineering design without carrying out a thorough geological survey leads to many design variations during implementation.* The proposed project has tried to ensure that the design institute has enough time to complete a thorough survey and carry out design work properly.
- *A weak local supervision team causes quality control during implementation to suffer.* The project team discussed supervision at length with the Hulunbeier project management office to ensure that the client takes site supervision work seriously and that the local supervision team recruited through national competitive bidding is of good quality.
- *Rushing through the procurement process in order to start construction quickly does not leave sufficient time for bidders to prepare good bids.* The task team for this project insisted on giving bidders sufficient time to prepare good bids and established procedures that do not allow the client to shorten the bid period without good reason.

6. Alternatives considered and reasons for rejection

HMH component

Route alignment alternatives for four HMH road sections were studied in depth during project preparation. The four road sections chosen, totaling about 102 km, account for 58 percent of the length of the proposed HMH. The alignments chosen, the alternatives, and the reasons that the final choices were made are described below:

- *Bayankuren town bypass (section A)*—One option was a northern bypass of Bayankuren that is 13.67 km long, while the other option was a southern bypass 13.0 km long. The southern option, although 670 m shorter than the northern, was dropped because the alignment was in the flood areas of Hailar River.

- *Huhenuer Lake section (section B)*—One alternative was a new construction plan with a better alignment, but it would have conflicted with the planned Huhenuer Lake tourism area and therefore was rejected. The other option (39 km), which uses most of the existing road with some improvement of sharp curves, was selected.

- *Chagang to Jalannuer section (section C)*—The recommended section is a new alignment that stretches out the sharp curves of the existing road. It is about 38 km in length, about 20 km shorter than the alternative option using most of the existing road. In addition, the recommended option is US$25 million cheaper than the alternative because of its shorter length.

- *Manzhouli Bypass (section D)*—A bypass of the city of Manzhouli (12 km) was compared with the existing alignment of NH 301 that passes through the city. The alternative design through the city was dropped because the road width could not meet Class I standards and upgrading the road would have interfered with settlements along the road.

The selected alignments were optimized further during the preliminary design. About 9 km of section B still fell within the planned Huhenuer Lake tourism area and therefore was changed. The alignment of section C in the feasibility report was shifted to pass north of the lakes instead of passing between the lakes to avoid unfavorable geologic conditions while keeping environmental impacts to the lakes minimal and road length the same.

CTT component

Three locations for the CTT were considered: (1) at the Manzhouli checkpoint, (2) in Hailar, and (3) between Manzhouli and Hailar. The third option had the merit of space but little else. The first option would have added to the congestion at the checkpoint and would not have permitted Russian trucks to transit Chinese territory to the maximum distance permitted. The second option for the site of the proposed CTT, the Haidong Industrial Development Zone, overcame the disadvantages of the first and third options while also enabling the CTT to replace an obsolete inner city truck terminal. In Hailar, the CTT is centrally located in relation to five other border crossings with Russia and two with Mongolia.

The type and nature of facilities and services designed for the CTT reflected the requirements and preferences of potential users based on a survey conducted by the Sociology Department of Hohai University in March 2004. The population of the survey included importers/exporters, forwarding agents, trucking companies, truck drivers and cargo agents in Hailar and Manzhouli. Questions asked in the survey included the type and nature of facilities and services to be provided, ownership and management modalities (public vs. private sector), preferences for the type and capacity of equipment and, in the case of truck drivers, the nature of amenities and conveniences. The survey established that there was an overwhelming support for the CTT with 96% of the potential users polled expressing interest to rent space at the CTT. Most were in favor of the CTT being developed and managed by a government agency. The greatest facility requirement was parking bays for trucks followed by conventional and temperature-controlled warehousing. Equipment with a higher capacity (over 10 tons) was preferred over those of lower capacity. More than 75% of truckers polled expressed the need for dining and washroom facilities, a workshop for minor repairs and overnight accommodation. About 25% of drivers surveyed were Russian truck drivers.

Summary of the key analysis and findings of the CTT user survey

- Currently, there is no regular large cargo handling facility in Hailar City. Cargoes are handled and stored with various small companies and/or government department storage.
- Facilities are not open for public use. Some cargoes are handled in open space by the roads outside the city and some parking facilities are also assuming cargo transfer functions.
- There is an urgent need to establish a regular, modern and full-function cargo handling terminal both in view of the fast growing border trade and the rapid growth of local economy. Hailar City is by far a most appropriate location for such purpose.
- Facilities most needed include parking lots (99% of the respondents), large storage house (88%), temperature controlled storage facilities (77%), open storage lots (63%), loading docks and cargo handling equipments (51%).
- Majority polled expressed preference for hotel rooms, restaurants, public restrooms, gas stations and vehicle repairing services. As for customs and quarantine offices, 89% expressed preference for it, while 12% expressed otherwise.
- Regarding the terminal investment, 43% of respondents felt that it is a high risk venture, hence the government should be responsible for the terminal investment while 21% felt it should be left to the association of traders, and 10% felt it should be done totally by private sectors.
- As for the operation and management of the terminal, 30% felt that the terminal should be managed by the government, while 25% felt it should be done by the associations of traders, and 18% prefer to leave it to private sector.
- 96% of the interviewed expressed willingness to rent and use the terminal while 6% are not interested.

C. IMPLEMENTATION

1. Partnership arrangements (if applicable)

Not applicable.

2. Institutional and implementation arrangements

Technically, IMCD has overall responsibility for project preparation and implementation. It will be directly responsible for formulating, implementing, and managing the project. However, administratively, the local government of Hulunbeier has responsibility for making local arrangements related to environmental safeguards, land acquisition, and resettlement arrangements for project-affected people. The Hai–Man project management office (HMPMO) has been established in the Hulunbeier branch of the IMCD in Chenqi, headed by the director general of IMCD and assisted by the deputy director general of IMCD and the deputy mayor of Hulunbeier. The HMPMO will assume overall implementation and coordination responsibility for all components and every aspect of the project.

The CTT component will be developed and operated by the Hulunbeier government. In the long term, depending on how fast demand for terminal use grows, various facilities in the terminal may be leased to and operated by the private sector.

The project will be implemented 2004–2009. Overall direction of the project at the central level rests with MOC in Beijing. The Bank loan will be lent to the borrower, the People's Republic of China (PRC). Its Ministry of Finance (MOF) will on-lend the loan proceeds to Inner Mongolia.

3. Monitoring and evaluation of outcomes/results

Monitoring and evaluation data will be collected and coordinated by the PMO with the active participation of Hulunbeier government. Baseline information and target values were agreed with IMCD during preparation.

HMH component. HMPMO will prepare quarterly reports delineating implementation progress and covering procurement, construction progress, and quality, including all work variations and cost control. After the construction is completed, the highway will be monitored and managed by the IMCD High-grade Highway Bureau. Environmental monitoring will be entrusted to Hulunbeier Environmental Bureau, which is an entity independent of IMCD. The monitoring of social and resettlement safeguards will also be done by an external independent entity that will be hired by IMCD.

BRFT component. IMCD will have overall coordination responsibility for the BRFT component, with intensive participation from the local government of Hulunbeier. The monitoring and evaluation of outcomes, including the collection of evaluation data, will be done by the government of Hulunbeier with technical support from IMCD.

CTT component. The government of Hulunbeier will be solely responsible for the management and monitoring of the CTT component.

4. Sustainability

The strong commitment of the central, provincial, and local Hulunbeier governments to the project is the main indication of the sustainability of the project. Furthermore, the project has national importance because it is part of the State Council's plan to expand border trade with Russia through the Hailar–Manzhouli corridor. For their parts, MOC and the government of Inner Mongolia already have approved RMB 790 million and RMB 500 million, respectively, as the state and provincial contributions to the project.

5. Critical risks and possible controversial aspects

Although implementation quality and progress of the Bank's ongoing highway projects in Inner Mongolia are generally satisfactory, adding another project inevitably would tax the limited management resources of the IMCD. The issue was extensively discussed during project identification, and top-level managers in IMCD admitted the need to address the problem to avoid compromising the quality of implementation of the ongoing projects or of preparation of the new project.

After several options were explored, IMCD came up with an innovative and efficient arrangement to entrust the government of Hulunbeier to lead the team of IMCD staff during the preparation of the project. This combines the strength of the two agencies—the government of Hulunbeier League, which has the best knowledge of the local situation and development demand; and the staff of IMCD, who are familiar with Bank processing requirements through their involvement in the two ongoing projects.

Another risk is that the transport services and trade facilitation component is a departure from IMCD's traditional focus on transport infrastructure. Hulunbeier government's involvement in the early stages of project preparation has been of critical importance for mitigating this risk and its ongoing participation could compensate for IMCD's shortcomings in transport services and trade facilitation, which underpin the primary objective of the project and are critical to its success.

6. Loan/credit conditions and covenants

The effectiveness condition is the issuance of acceptable legal opinions.

Legal covenants include the following:

a. *Hailar-Manzhouli Highway*

Inner Mongolia shall:

(a) take, or cause to be taken, all necessary actions to minimize to the extent possible any involuntary loss by persons of shelter, productive assets or access to productive assets or of income or means of livelihood, temporarily or permanently;

(b) carry out the EMPs and RAPs in a manner satisfactory to the Bank;

(c) furnish any proposed revision of the plans referred to in sub-paragraph (b) above to the Bank for its prior approval;

(d) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with indicators acceptable to the Bank, the carrying out of the EMPs, RAPs and the EMDP;

(e) prepare under terms of reference acceptable to the Bank, and furnish to the Bank:

(i) an annual environmental monitoring report, by June 15 of each year, commencing June 15, 2006, and until completion of the Project;

(ii) by May 15 and November 15 of each year and until completion of the Project, commencing May 15, 2005, an internal monitoring report prepared by the appropriate agencies of Inner Mongolia on the implementation and impact of resettlement activities during the preceding one year or six-month period, as the case may be; and

(iii) by March 15 and September 15 of each year and until completion of the Project, commencing September 15, 2005, an external monitoring report prepared by an independent entity acceptable to the Bank on the implementation and impact of resettlement activities and the EMDP, during the preceding year or six-month period, as the case may be.

(f) prepare, and provide to the Bank a monthly progress report, in form and content satisfactory to the Bank, on the progress of civil works, commencing May 1, 2005, and until completion of the civil works.

b. *Border Roads for Trade*

Inner Mongolia shall:

(a) take, or cause to be taken, all necessary actions to minimize to the extent possible any involuntary loss by persons of shelter, productive assets or access to productive assets or of income or means of livelihood, temporarily or permanently;

(b) carry out the EMPs and RAPs in a manner satisfactory to the Bank;

(c) furnish any proposed revision of the plans referred to in sub-paragraph (b) above to the Bank for its prior approval;

(d) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with indicators acceptable to the Bank, the carrying out of the EMPs, RAPs and the EMDP; and

(e) prepare under terms of reference acceptable to the Bank, and furnish to the Bank:

(i) an annual environmental monitoring report, by June 15 of each year, commencing June 15, 2006, and until completion of the Project;

(ii) by May 15 and November 15 of each year and until completion of the Project, commencing May 15, 2005, an internal monitoring report prepared by the appropriate agencies of Inner Mongolia on the implementation and impact of resettlement activities during the preceding one year or six-month period, as the case may be; and

(iii) by March 15 and September 15 of each year and until completion of the Project, commencing September 15, 2005, an external monitoring report prepared by an independent entity acceptable to the Bank on the implementation and impact of resettlement activities and the EMDP, during the preceding year or six-month period, as the case may be.

c. *Trade Facilitation Component*

Inner Mongolia shall:

(a) take, or cause to be taken, all necessary actions to minimize to the extent possible any involuntary loss by persons of shelter, productive assets or access to productive assets or of income or means of livelihood, temporarily or permanently;

(b) carry out the EMPs and RAPs in a manner satisfactory to the Bank;

(c) furnish any proposed revision of the plans referred to in sub-paragraph (b) above to the Bank for its prior approval;

(d) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with indicators acceptable to the Bank, the carrying out of the EMPs, RAPs and the EMDP;

(e) prepare under terms of reference acceptable to the Bank, and furnish to the Bank:

(i) an annual environmental monitoring report, by June 15 of each year, commencing June 15, 2006, and until completion of the Project;

(ii) by May 15 and November 15 of each year and until completion of the Project, commencing May 15, 2005, an internal monitoring report prepared by the appropriate agencies of Inner Mongolia on the implementation and impact of resettlement activities during the preceding one year or six-month period, as the case may be; and

(iii) by March 15 and September 15 of each year and until completion of the Project, commencing September 15, 2005, an external monitoring report prepared by an independent entity acceptable to the Bank on the implementation and impact of resettlement activities and the EMDP, during the preceding year or six-month period, as the case may be.

(f) furnish to the Bank for comments, by December 31, 2006, the recommendations of the diagnostic study on measures to promote cross-border trade between China and its land-locked neighbors study.

d. *Institutional Strengthening and Training*

Inner Mongolia shall:

(a) furnish to the Bank for comments, by November 15 in each year, commencing November 15, 2005, an annual training program and, thereafter, carry out such training program taking into account the Bank's comments, if any; and

(b) furnish to the Bank by November 15 in each year, commencing November 15, 2006, an annual training report describing the training carried out during the preceding year.

e. *Reporting, monitoring and auditing*

Inner Mongolia shall:

(a) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with indicators satisfactory to the Bank, the carrying out of the Project and the achievement of the objectives thereof;

(b) prepare, under terms of reference satisfactory to the Bank, and furnish to the Bank, on or about February 15 in each year, commencing February 15, 2006, a report integrating the results of the monitoring and evaluation activities performed pursuant to paragraph (a) of this Section, on the progress achieved in the carrying out of the Project during the period preceding the date of said report and setting out the measures recommended to ensure the efficient carrying out of the Project and the achievement of the objectives thereof during the period following such date; and

(c) review with the Bank, by May 15 in each year, commencing May 15, 2006, or such later date as the Bank shall request, the report referred to in paragraph (b) of this Section, and, thereafter, take all measures required to ensure the efficient completion of the Project and the achievement of the objectives thereof, based on the conclusions and recommendations of the said report and the Bank's views on the matter.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

Economic (Cost benefit)

EIRR = 17.0%, NPV (12%) = US$100.7 million

This economic evaluation covers: (i) construction of the 177 km HMH, (ii) upgrading of five local roads (413 km) under the BRFT component, and (iii) the development of the CTT. The principal measured

benefits of the project come from the HMH and BRFT components. They are savings in vehicle operating costs, time savings to vehicle occupants, and enhanced road safety. The estimated overall economic internal rate of return (EIRR) for the project is 17.0 percent, with those for HMH, BRFT, and CTT being 15.7 percent, 21.3 percent, and 24.5 percent, respectively. The overall economic net present value (NPV), based on a 12 percent discount rate, is estimated at RMB 835.5 million, of which HMH is estimated to contribute RMB 484.4 million, BRFT is estimated to contribute RMB 318.3 million, and CTT is estimated to contribute RMB 32.9 million. An analysis of the evaluation results and a description of the method used to derive them are provided in Annex 9 and summarized as follows:

Summary of Economic Evaluation Results

	EIRR (in %)	NPV (RMB million, 12%)
a. Hailar – Manzhouli Highway (HMH)	15.7	484.4
b. Border Roads for Trade (BRFT)	21.3	318.3
c. Cargo Transfer Terminal (CTT)	24.5	32.9
Total Project	17.0	835.5

Financial

A fiscal impact analysis was done for both the HMH and BRFT components. The financial evaluation confirmed the availability of sufficient counterpart funds and the capacity of IMCD to finance operating expenses. All the indicators show that the fiscal impacts and risks are modest. A detailed assessment is provided in Annex 9.

2. Technical

Issues that need special attention from a technical point of view are:

- Proper review of selected design standards, especially to take into consideration safety on a high-speed road;
- Adequate geological investigation at the design stage to minimize the risk of encountering major problems at the construction stage, as has occurred in other highway projects in China; and
- An appropriate level of electrical and mechanical works at the opening of the highway to traffic.

3. Fiduciary

Financial management

The Bank mission conducted a financial management assessment of the HMPMO and concluded, on the basis of guidelines issued by the Financial Management Sector Board of June 30, 2001, that the project meets minimum Bank financial management requirements (stipulated in BP/OP 10.02). The assessment found that the project will have in place a project financial management system that can provide, with reasonable assurance, accurate and timely information on the status of the project in the format agreed with the Bank (Annex 7).

Procurement

A procurement capacity assessment of the implementing agencies was carried out during preappraisal (Annex 8). The assessment concluded that the overall risk of the procurement process is average.

IMCD and dependent entities involved have allocated adequate resources, including experienced staff, to implement the project. These agencies (except those under the local government of Hulunbeier) are familiar with Bank procurement procedures. An action plan to strengthen the procurement capacity of the implementing agencies (including staff assigned from Hulunbeier) has been discussed with HMPMO and

agreed upon. The plan calls for the preparation and dissemination of a project-specific procurement manual, training workshops, and measures to avoid excessive cost overruns and improve procurement economy and efficiency. Ways in which the Tendering and Bidding Law of China differs from Bank guidelines were addressed in the assessment, and clarifications for the procedures to be followed for Bank-financed NCB procurement will be included in the loan agreement.

4. Social

Project planning included a social assessment and the development of RAPs as well as an ethnic minority people's development plan. This helped identify project impacts, facilitate consultation with various stakeholders, develop necessary mitigation measures, and put in place implementation arrangements.

The main adverse impact is the need for land acquisition. The project will require 16,984 mu of land, including 546 mu of cultivated land and 14,287 mu of grassland, affecting 2,129 people in 590 households in 39 villages. The average individual land holding is large in the project areas and the average grassland lost for each family is less than 1 percent of total holdings. There will be limited impacts on trees and public infrastructure. Five RAPs have been developed in line with local laws and policies and World Bank OP 4.12 on Involuntary Resettlement and are based on consultations with the affected people. These plans describe in detail the impacts, affected populations, consultation process, rehabilitation measures, budget, and implementation and monitoring arrangements.

Hulunbeier has 35 ethnic minority groups, with a population of 468,600, about 18 percent of its total population. Project preparation was conducted on the basis of close consultation with and participation by the local people, including the ethnic minority population. Project information was provided to the ethnic minority groups through radio broadcast, meetings, and village public boards. Various consultation efforts enabled the ethnic minority groups to participate in and influence the project design.

The project is expected to benefit all local populations, including ethnic minority groups, through i) improved transportation conditions, particularly through the BRFT component, ii) improved employment opportunities under the project, iii) promotion of better use of natural resources and development of livestock industries.

Adverse impacts are associated mainly with land acquisition, house demolition, and inconvenience in road crossings and operation of hay-transporting vehicles. Project land acquisition will affect mainly Inner Mongolian families, and the BRFT component will also affect a small number of Daker and Elunchun families. All families have been identified, and mitigation measures have been developed. Two concerns emerged in the consultation process relating to access to grazing areas and the safe operation of hay-transporting vehicles with the upgraded highway. These concerns have been shared with the design engineers. Mitigation measures and alternatives have been under discussion with the local population and some have already been incorporated into the technical design. Consultations are ongoing with local governments and the local population.

5. Environment

OP 4.01 Environmental Assessment

This is a category A project under OP.4.01 Environmental Assessment. IMCD has prepared the Environmental Impact Assessment (EIA) and the Environmental Action Plan (EAP) through the required two-step consultation. Those documents were disclosed locally and in Washington, D.C., in July 2004.

To minimize environmental impacts, intensive alternative analysis was conducted, including the non-project alternative. The design includes the following major considerations: (i) avoid under-planning of tourism areas; (ii) use the existing alignment as much as possible; (iii) avoid fragile ground in an old mining area; (iv) avoid passing through Manzhouli City; and (v) minimize the road length crossing Erka Wetland.

At the public consultations, participants voiced their concerns about: (i) the free movement of their herd animals, (ii) recovery of vegetation along the highway, and (iii) damage to the scenery from borrow pits or dumping sites. In response to these concerns, (i) the number of culverts has been increased from 104 in the original design to 110, and pathways and passenger overpasses from 30 to 47; (ii) a budget for rehabilitation of vegetation has been allocated; (iii) a dumping site will be moved to behind a mountain to avoid spoiling the scenic view.

The EIA identified four environmentally sensitive areas: (i) four residential areas with from 17 to 475 households, (ii) one hospital with 260 beds, (iii) three seasonal rivers, and (iv) Erka wetland. IMCD has experience in dealing with noise, dust, and water pollution control from past projects, including two Bank projects. The EIA and EAP established mitigation measures to control environmental impacts to an acceptable level.

OP 4.04 Natural Habitat

The project area lies mainly in grassland with herding and agricultural activities. There are no environmentally protected areas in the impact zone of the project. A 13 km section of the proposed alignment passes through Erka Wetland, which is a natural habitat but not protected, although there are several protected wetlands in Inner Mongolia. The safeguard meeting in January 2004 decided to evaluate the quality and importance of the Erka Wetland, and an independent international ecological expert was hired to conduct a field survey and review the EIA in May 2004 and recommend mitigation measures.

According to the international expert: (i) Erka Wetland has international importance in terms of migration of birds; (ii) The project will have major impacts during the construction period, but minimal impacts during the operation stage; and (iii) The promotion of ecotourism and protection of the wetlands were recommended as mitigation measures. IMCD and the Hulunbeier Government agreed to take the necessary measures to carry out his recommendations.

The EAP specifies multiple mitigation measures to control the impacts to an acceptable level. The project will not cause a significant level of change to the existing environment. In addition to mitigation measures, the project will promote ecotourism by building a small facility composed of a small parking lot, wood path, and educational signs, and the local government agreed to set up a wetland protection plan to control long-term impacts from the operation of the highway.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[X]	[ ]
Pest Management (OP 4.09)	[ ]	[X]
Cultural Property (OPN 11.03, being revised as OP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[X]	[ ]
Ethnic Minority Peoples (OD 4.20, being revised as OP 4.10)	[X]	[ ]
Forests (OP/BP 4.36)	[ ]	[X]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP/GP 7.50)	[ ]	[X]

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

7. Policy exceptions and readiness

The project will comply fully with Bank policies. The project meets regional criteria for implementation.

Annex 1: Country and Sector or Program Background

CHINA: Inner Mongolia Highway and Trade Corridor Project

COUNTRY PROSPECTS AND ISSUES

1. China is passing through four major transitions:

- From a centrally planned to a market-based economy
- From an agrarian to a modern industrial and urbanized economy
- From a society with a high birth rate and low longevity to one with a low-birth rate and high longevity
- From a closed to an open economy.

2. Improving transport infrastructure, thus reducing transportation costs, will help China expand its external trade and therefore its degree of openness.

TRANSPORT SECTOR BACKGROUND

3. For the past 20 years, the Chinese economy has grown remarkably fast, averaging 8–10 percent growth per year, enabling the country to join the World Trade Organization in 2001. As a result of this growth, more motorized vehicles and heavier traffic have put a heavy demand on infrastructure. Both passenger and freight traffic has grown rapidly in the past five years—7.1 percent annually for passengers and 5.5 percent for freight. The number of registered vehicles, currently 20.5 million, is expected to reach 34 million by 2010. This rapid economic development has created the need for an appropriate road network. The length of the road network has more than doubled since 1980, to approximately 1.8 million km in 2003. Even more impressive, China had zero km of expressway in 1985, and will have 35,000 km by the end of 2005.

4. Despite China's massive investment in the construction of new highways (2.8 percent of GDP on average from 1997 to 2003), funding is still insufficient to meet demand. The government is developing a long-term plan for the road sector that calls for different kinds of works on 300,000 km of roads of various standards and classes that will require US$84 billion over 10 years. China now realizes that transport infrastructure is vital for integrating poorer provinces into the national market, and thus for increasing their degree of openness and realizing their economic potential.

5. But funding is not the only issue facing the Chinese road sector—institutional reform is also intensifying. Transforming the government into a market-supporting institution is one of the largest transition issues facing China. The strategic focus of the transport sector has been to improve transport efficiency (including safety) while reducing transport costs, which will, in turn, contribute to the competitiveness of China's external trade. The challenges of implementing this strategy in China's highway sector include improving management of the sector, rationalizing road expenditures and revenue arrangements, enhancing accessibility to remote and low-income areas, and improving traffic safety.

6. *Sector management.* In the highway sector, the government's role in providing transport infrastructure (construction and maintenance) and services is shifting gradually from that of owner, investor, and manager to one of regulator. As regulator, the government must oversee and encourage the development of more independent enterprises (in some cases, not owned by the state) that can provide cost-effective civil works and services. The pace of this transformation depends on the level of development of the provinces, which varies widely, especially between coastal and interior provinces.

Managing road expenditures

7. The sector is striving to improve efficiency and minimize the costs of providing services. Efforts by the provincial communications departments (PCD) to improve operations while rationalizing and minimizing costs cover all activities of a road administration, from planning to design, construction, and maintenance of roads at all levels.

8. *Planning.* The allocation of funds between maintenance and new construction remains a major problem, which is part of planning. There is a need for more discriminating investment analysis, starting with planning. It will be necessary for the country to be more selective when planning its road expenditures, even though there is still a strong demand for additional investments in the road network.

9. *Balance of expenditures.* China's National Trunk Highway System consumes 60 percent of highway sector resources, reflecting the country's focus on growth rather than distribution. The imbalance between classes of roads should be reviewed carefully to determine whether the current allocation of resources is the most efficient for supporting economic development. The need for careful analysis of future investments will be especially important for projects proposed in the western provinces, where the types and scale of investment are likely to differ from those in the eastern provinces.

10. *Construction quality.* Highway construction quality remains a serious concern. Incidences of bridge and road failings and premature wear and tear on highway pavement have raised high-level Government official's awareness of the issues. The problem has been technical and administrative roots.

Managing road revenue and financing

11. Resources are inadequate to meet the increasing demand placed on road infrastructure by a rapidly growing economy.

12. *Road user charges.* The main road user charge is the road maintenance fee, which brings in revenues of more than RMB 35 billion a year. Other charges, including the vehicle tax and registration fee, contribute probably half as much as the maintenance fee. Road users thus bear a relatively large portion of annual road expenditures—about one-quarter in the past two years. In addition, the road maintenance fee is inefficient because it is expensive to administer yet easy to evade, and generates less than 40 percent of its potential revenue.

13. *Fuel tax.* China has discussed introducing a fuel tax for some years, and although the National Congress passed the fuel tax resolution in November 1999, its implementation has been deferred indefinitely.

14. *Securitization.* The sale of highway equity through initial public offerings and private placements has been an innovative feature of mobilizing private resources for the highway sector. Unlike with build-operate-transfer projects, the securitization of highways already open to traffic greatly reduces investors' risk. However, given the proliferation of road companies in all provinces, the securitization of road assets has slowed significantly in the past two years. In these circumstances, the government should focus on building a reliable and stable road user fee–based financing framework. At the same time, regulatory reforms are necessary to open opportunities for different modes of public–private partnerships, mobilize domestic savings through the issuance of bonds, and broaden the investor base.

Enhancing accessibility to remote and low-income areas

15. The geography of China poses great obstacles to providing basic road access throughout the country, particularly in inner and low-income provinces. Although the role of transport access in integrating the national economy, stimulating growth in remote areas, and ensuring the basic mobility needs of the poor has been emphasized, providing this access is an enormous task that requires significant public resources.

Traffic safety

16. Traffic safety remains a major issue. In 2002 China recorded 773,000 accidents, with 109,000 fatalities and 562,000 injuries, a direct economic loss estimated at US$3 billion. The Asian Development Bank estimates the total economic loss from road crashes at US$12 billion per year. The traffic fatality rate is three times the U.S. rate and is among the world's highest, and road accidents are the leading cause of death for Chinese people under age 45. As alarming as these figures are, they probably understate the reality. World Bank projections indicate that if current trends continue, traffic fatalities will rise from 7.4 per 100,000 people in 2000 to more than 10 per 100,000 people in 2005.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

CHINA: Inner Mongolia Highway and Trade Corridor Project

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress	Development Objective
Bank-financed			
1. Remove highway capacity bottlenecks	Anhui Provincial Highway (ongoing) (sector issues 1-5)	S	S
2. Institutional strengthening and training	Second Henan Provincial Highway (ongoing) (sector issues 1-6)	S	S
3. Rural roads and poverty alleviation	Third National Highway: (ongoing) (sector issues 1, 2, 4-6)	S	S
4. Highway safety	Third Henan Provincial Highway (ongoing) (sector issues 1-6)	S	S
5. Operation and maintenance of high-grade highways	Tri-Provincial Highway (ongoing) (sector issues 1-6)	S	S
6. Cost recovery	Fourth National Highway (ongoing) (sector issues 1-5)	S	S
	Second Fujian Highway (ongoing) (sector issues 1, 2, 4-6)	S	S
	Guangxi Highway (ongoing) (sector issues 1-6)	S	S
	Second Jiangxi Highway (ongoing) (sector issues 1-6)	S	S
	Inner Mongolia Highway (ongoing) (sector issues 1-6)	S	S
	Xinjiang III Highway (ongoing) (sector issues 1-6)	S	S
	Hubei Xiaogan-Xiangfan Highway (ongoing) (sector issues 1-6)	S	S
	Second Anhui Highway Project (sector issues 1-6)	S	S
	Hubei Shiman Highway Project (sector issues 1-6)		

Other development agencies	
Asian Development Bank	**Ongoing projects:**
	Changchun-Harbin Expressway: Hashuang Expressway
	Changchun-Harbin Expressway: Changyu Expressway
	Shanxi Roads Development
	Southern Yunnan Road Dev.
	Chongqing-Guizhou Roads Dev. (Leichong Expressway)
	Shaanxi Roads Development
	Guangxi Roads Development
	Chengdu-Nanchang Expressway
	Shanxi Road Development II
	Southern Sichuan Roads Dev.
	Ningxia Roads Development
	Western Yunnan Roads Development
	Hunan Roads Development II
	Guangxi Roads Development II
Japan Bank for International Cooperation	**Ongoing projects:**
	Hangzhou-Quzhou Expressway
	Wanxian-Liangping Expressway
	Liangping-Changshou Expressway
	Hainan East Expressway
	Xinxiang-Zhengzhou Highway
	Heilongjiang Heife-Beian Road
	Gansu Province Road Construction Project
	Hunan Province Road Construction Project

Annex 3: Results Framework and Monitoring

CHINA: Inner Mongolia Highway and Trade Corridor Project

Results Framework

PDO	Outcome Indicators	Use of Outcome Information
Promote trade expansion by providing convenient transport and relevant trade facilitation	- Reduced travel time along the HMH corridor - Increased volume of cargo for import/export at the border - Increased tonnage of cargo handled at CTT	Feedback to the Regional Development Plan to promote more international trade and take measures to remove obstacles
Intermediate Results (One per Component)	**Results Indicators for Each Component**	**Use of Results Monitoring**
Component 1: Improve capacity of transport infrastructure along Hailar-Manzhouli corridor (HMH)	**Component 1:** Progress of works completed (%)	**Component 1:** Monitoring of implementation progress and action plans to address possible delays
Component 2: Improve highway network to handle increasing volume of international freight traffic (BRFT)	**Component 2 :** Progress of works completed (%)	**Component 2:** Monitoring of implementation progress and action plans to address possible delays
Component 3: Develop the cargo transfer terminal and trade facilitation	**Component 3:** Progress of works completed (%)	**Component 3:** Monitoring of implementation progress and action plans to address possible delays
Component 4: Build up institutional capacity in IMCD and local Hulunbeier government	**Component 4:** Number of staff trained; Diagnostic study report completed	**Component 4:** Monitoring of implementation progress and action plans to address possible delays

Arrangements for Results Monitoring

Outcome Indicators	Target Values						Data Collection and Reporting		
	Baseline 2003	Yr. 1 2005	Yr. 2 2006	Yr. 3 2007	Yr. 4 2008	Yr. 5 2009	Frequency and Reports	Data Collection Instrument	Responsibility for Data Collection
Travel time along HMH corridor (min)	180	210	210		100	100	Annual monitoring report	Statistical yearbook	HMPMO
Cargo volume at the border (1,000 tons)									
Import	394.2	630.0	675.0		810	850.0			
Export	43.8	70.0	75.0		90.0	100.0			
Cargo volume on railway (1,000 tons)									
Import	9,180	10,400	10,850		11,700	12,550			
Export	1,820	2,050	2,150		2,300	2,450			
Share of Trade Cargo by mode (1,000 ton)									
Import - railway	95.9	94.3	94.1		93.5	93.7			
Import - highway	4.1	5.7	5.9		6.5	6.3			
Export - railway	97.4	96.7	96.6		96.2	96.1			
Export - highway	2.6	3.3	3.4		3.8	3.9			
Cargo handled at CTT (1,000 tons)	72				150	350			
AADT on HMH (MTE per day)									
Hailar–Chenbaerhu	3,300	4,200	4,700		6,000	6,800			
Chenbaerhu–Wuzhuer	2,400	3,000	3,300		4,100	4,600			
Wuzhuer–Chagang	1,800	2,200	2,400		3,000	3,400			
Chagang–Zhalainuoer	1,700	2,000	2,100		2,400	2,700			
Zhalainuoer–Manzhouli	3,900	4,900	5,400		6,800	7,500			
Manzhouli–Guomen Port	1,800	2,300	2,700		3,600	4,000			
AADT on BRFT (MTE per day)									
Dayangshu–Baihuapai	1,020		1,250	1,390	1,800				
Zhalainuoer–Heishantou	800		900	1,000	1,200				
Yimin–andagai	820		930	1,040	1,320				
Alatanemole–Arihashate	290		350	390	430				
Amugulang–Ebuduge	300		380	420	610				

Results Indicators for Each Component	Target Values					Data Collection and Reporting		
	2004	2005	2006	2007	2008	Frequency and Reports	Data Collection Instrument	Responsibility for Data Collection
Component 1								
% of HMH civil works completed		20	60	90	100	Monthly progress report		HMPMO
Component 2								
% of BRFT civil works completed						Quarterly progress report		HMPMO
Dayangshu–Baihuapai		40	100					
Zhalainuer–Heishantou		20	80	100				
Yimin–Handagai		20	80	100				
Alatanemole–Arihashate		20	80	100				
Amulgulang–Ebuduge		80	100					
Component 3								
% of CTT completed		20	70	100		Quarterly progress report		HMPMO
% study on measures to promote cross border trade completed		80	100					
Component 4								
% training program completed						Quarterly progress report		HMPMO
Domestic: person/months		20	50	80	100			
Overseas: person/months		20	50	80	100			

Annex 4: Detailed Project Description

CHINA: Inner Mongolia Highway and Trade Corridor Project

COMPONENT 1—HIGHWAY CAPACITY EXPANSION (US$172.69 MILLION)

Construction of the Hailar–Manzhouli Highway: US$163.38 million

1. Construction of the approximately 177 km Hailar–Manzhouli Highway (HMH) is the project's main component. This does not include the 4 km Jalannuer–Manzhouli section built under a public–private investment scheme, but does include a city road section connecting to the customs area in Manzhouli. Of the 177 km, 110 km will be reconstructed and widened, and 56 km will be new construction on a new alignment. The last section bypassing Manzhouli will be also widened to four lanes. The eastern link from Hailar to Yakeshi is under construction and is expected to be completed by August 2005.

2. The HMH is a divided, four-lane, partially access-controlled highway that could be operated as an open toll highway if IMCD finally decided to toll the highway. It will include two interchanges and three toll stations, service areas, and parking bays, as well as facilities for highway administration and maintenance.

Equipment: US$3.94 million

3. Equipment will be procured for maintaining national and provincial highways (including expressways) and other lower-class roads. Equipment needed for controlling construction quality and monitoring and for institutional strengthening will be procured or supplied before civil works begin and will be financed locally. The equipment list, which includes cost estimates, is available in the project file.

Supervision of construction: US$5.37 million

4. A supervision team composed of local firms and international consultants and headed by a chief supervision engineer will supervise the construction of HMH in accordance with FIDIC provisions. The chief supervision engineers' office will be located at Chenqi and will be staffed with 200 domestic supervision engineers (for about 3,600 person-months). Local supervision engineers will be hired according to MOC regulations and procedures. Two foreign engineers will be integrated into the core supervision team. These services are estimated at 38 person-months, including about 2 person-months for the training services.

COMPONENT 2—BORDER ROADS FOR TRADE (US$51.30 MILLION)

5. The Border Roads for Trade (BRFT) component has been designed to connect with ports and international border crossings to promote trade with Russia and Mongolia and fill in missing links in the critical road network. Inner Mongolia recognizes that eastern Russia's and Mongolia's trade with countries beyond China conceivably could transit Chinese territory for shipments through Chinese seaports.

6. The originally proposed road sections included 13 sections with a total length of about 1,350 km. Five sections with a total length of about 413 km were selected for inclusion in the project, of which 71 km will be Class II highway and 342 km will be Class III roads. The roads were selected according to the following criteria:

- They were existing roads that needed improvement or upgrading to strengthen a local highway network and/or;
- They connect to a port or international border crossing to promote trade.

7. Feasibility studies and environmental assessment reports for each proposed road section were reviewed. The selected road sections are shown in the following table. The EIRR range from 15.3 percent to 22.5 percent.

Border Roads for Trade Segments

Road Section	Road Class		Completed Length (km)	Planned Subgrade Width (m)	Estimated Construction Cost (RMB million)	Remarks
	Current	Planned				
Dayangshu–Baihuapai	III or substandard	II	70.5	8.5	109.54	Links to high-poverty area
Zhalainuoer–Heishantou	Substandard	III	138.0	8.5	134.95	Connects to important land port to Russia
Yimin–Handagai	Substandard	III	103.0	7.5	88.43	Links to seasonal port to Mongolia
Alatanemole–Arihashate	III/IV	III	82.5	7.5	44.01	Connects with Mongolia
Amugulang–Ebuduge	Substandard	III	19.3	8.5	16.43	Connects to land port to Mongolia
			413.3		393.06	US$47.36 million

COMPONENT 3—TRADE FACILITATION COMPONENT (US$2.64 MILLION)

8. The trade facilitation component of the project consists of the development of a cargo transfer terminal (CTT) and a diagnostic study on measures to promote cross-border trade between China and its neighbors.

CTT (US$2.54 million)

9. The purpose of the CTT is to provide the facilities and services necessary for the transfer of cargo from Russian trucks to Chinese trucks as well as for the distribution and consolidation of cargo. The CTT will be developed in phases. The first phase of the proposed CTT is designed to have the capacity to handle 850,000 tons of cargo per year.

10. The CTT, located in the Haidong Industrial Development Zone in Hailar, will have basic facilities and utilities such as a substation and power lines, an office block of 600 sq. m, warehouses (temperature-controlled for conventional products and fruits and vegetables) with a total floor area of 6,000 sq. m, a loading/unloading platform of 1,600 sq. m, a container yard of 2,010 sq. m, a maintenance workshop of 500 sq. m, vehicle parking lots, a heated covered garage of 750 sq. m, and a small building housing a cafeteria, washrooms and public conveniences, and overnight accommodations for truck drivers. Customs officers, stationed in the Haidong Industrial Economic Zone, will be available to clear cargo at the CTT. A rail siding provides access to the Binzhou Line (Harbin–Manzouli). The CTT will have cargo handling equipment: cranes, forklift trucks, pallets, stackers, a weigh-bridge, and computer servers for a computerized management and operating system.

Study on measures to promote trade (US$0.10 million)

11. The diagnostic study will identify measures that will help develop the full potential for cross-border trade between China, Russia, and Mongolia. These measures will include the development of infrastructure facilities and transportation network necessary to handle the movement of cargo between

the two countries as well as trade facilitation measures to promote the conduct and development of trade. The study will:

- Review the whole process and regime in which cross border trade is now conducted;
- Identify constraints (physical, systemic, procedural), if any, on conducting cross-border trade;
- Recommend measures to overcome such constraints and foster the development of trade;
- Suggest action plans for the short, medium, and long terms.

12. The study will require 3 person-months from each of a trade economist, a trade specialist, and a transport specialist. These consultants will supervise staffers who will collect data (for an estimated aggregate of 15 person-months).

13. The trade facilitation component is estimated to cost RMB 22 million (US$2.64 million) and will be financed locally.

COMPONENT 4—INSTITUTIONAL STRENGTHENING AND TRAINING (US$1.17 MILLION)

14. The IST component of the proposed project was designed to improve the efficiency and sustainability of road sector management in Inner Mongolia and strengthen institutional and policy development, focusing on logistics arrangements with neighboring countries.

15. A training program under previous projects has started strengthening the capacity of IMCD and related agencies. The program will build on training begun under these projects without duplicating it. New courses will take into consideration the activities of the ongoing Inner Mongolia Highway Project while relating directly to the implementation of project components. Subjects under overseas training and study tours include development and promotion of international trade activities, trade logistic planning and management, planning and design of trade processing zone, and container transport management in additional to the usual and conventional technical subjects of highway design and project management.

16. The training program will include overseas study tours (36 person-months), training courses abroad (40 person-months) and domestic courses (294 person-months). It will be updated periodically during project implementation.

Annex 5: Project Costs

China: Inner Mongolia Highway and Trade Corridor Project

Project Cost By Component and/or Activity	Local US$ million	Foreign US$ million	Total US$ million
1. Works	128.80	78.72	207.52
a) Hailar-Manzhouli Highway (HMH)	94.69	63.87	158.56
i) Civil Works	86.03	57.35	143.38
ii) Buildings	2.43	1.04	3.47
iii) Traffic Engineering	5.44	3.63	9.07
iv) E & M Facilities	0.79	1.85	2.64
b) Border Roads for Trade (BRFT)	33.15	14.21	47.36
c) Cargo Transfer Terminal (CTT)	0.96	0.64	1.60
2. Supervision of Construction	5.30	0.76	6.06
a) HMH	4.61	0.76	5.37
b) BRFT	0.69	0.00	0.69
3. Equipment	1.20	3.32	4.52
a) Road Maintenance	1.03	2.41	3.44
b) Cargo Handling at CTT	0.17	0.41	0.58
c) Institutional strengthening	0.00	0.50	0.50
4. Training	0.10	0.57	0.67
5. Trade Promotion Study	0.10	0.00	0.10
Total Baseline Cost	135.50	83.37	218.87
6. Contingencies	16.33	10.35	26.68
Physical Contingencies	12.88	7.87	20.75
Price Contingencies	3.45	2.48	5.93
7. Land Acquisition and Resettlement	8.43	0.00	8.43
a) HMH	4.82	0.00	4.82
b) BRFT	3.25	0.00	3.25
c) CTT	0.36	0.00	0.36
Total Project Costs[1]	160.26	93.72	253.98
Interest during construction	4.91	3.27	8.18
Front-end Fee	0.00	0.50	0.50
Total Financing Required	165.17	97.49	262.66

[1]Identifiable taxes and duties are US$8.18 million, and the total project cost, net of taxes, is US$ 253.98 million. Therefore, the share of project cost net of taxes is 29.4%.

Annex 6: Implementation Arrangements

CHINA: Inner Mongolia Highway and Trade Corridor Project

1. IMCD has demonstrated project management capability by successfully implementing two previous projects. IMCD has been an executing agency for the ongoing Tri-Provincial Highway Project since March 1999 and for the Inner Mongolia Highway Project since November 2002. Because the project site is far from the regional capital, IMCD has established the Hai-Man Project Management Office (HMPMO) in the Hulunbeier branch of IMCD in Chenqi. HMPMO will be headed by the director-general of IMCD and assisted by a deputy director general of IMCD and a deputy mayor of Hulunbeier. Because Hulunbeier has not handled such a large-scale project before, experienced staff from various bureaus of IMCD and Hulunbeier will be assigned to support the HMPMO. All the staff to be assigned to this project will receive training before project implementation commences. Overall direction of the project at the provincial level will remain with IMCD.

2. China International Tendering Company has been retained as the procurement agency for all aspects of civil works of the project requiring ICB and for equipment to be procured from abroad. The supervision of construction of the HMH will be carried out by a joint foreign–local supervision team. The supervision of construction of the BRFT will be carried out by local supervision teams.

3. IMCD in Hailar will develop and own the Cargo Transfer Terminal (CTT) but keep its options open by inviting private sector participation in the provision of services in the CTT by renting premises and/or equipment from IMCD in Hailar upon the completion of Phase 1 development. Phase 1, about 80,000 sq. m, will include basic facilities and utilities within its perimeter.

4. Bank supervision missions are scheduled for twice a year. Headquarters and resident mission staff will cooperate in this activity during the limited construction period from April to September. During implementation, project performance, including achievement of project outputs and development objectives, will be monitored during supervision missions and through annual monitoring reports.

Annex 7: Financial Management and Disbursement Arrangements

CHINA: Inner Mongolia Highway and Trade Corridor Project

SUMMARY

1. The financial management specialist conducted an assessment of the adequacy of the financial management system of the Inner Mongolia Transport and Trade Facilitation Project. The assessment, based on guidelines issued by the Financial Management Sector Board on October 15, 2003, concluded that the project meets minimum Bank financial management requirements, as stipulated in BP/OP 10.02. The financial management specialist found the project will have in place an adequate project financial management system that can provide, with reasonable assurance, accurate and timely information on the status of the project in the reporting format agreed with the project and required by the Bank.

2. Funding sources for the project include the Bank loan and counterpart funds. The Bank loan will be signed between the Bank and the People's Republic of China through the Ministry of Finance (MOF), and on-lending arrangements for the Bank loan will be signed between MOF and the Government of Inner Mongolia through Inner Mongolia Finance Bureau (IMFB) and then between IMFB and the Inner Mongolia Communications Department (IMCD). Counterpart funds will come from loans from local banks and government appropriations and will be provided to HMPMO through IMCD. No outstanding audit or audit issue exists with the implementing agency. The task team, however, will continue to be attentive to financial management matters and audit covenants during project supervision.

COUNTRY ISSUES

3. The World Bank has not performed a country financial accountability assessment for China and therefore has relied on a similar exercise carried out by the Asian Development Bank in 2000 for reference. Developments in public expenditure, accounting, and auditing, and Bank experience with projects in China in recent years show that substantial achievement in public financial management has been made and further improvement is expected in coming years. The government has come to realize the importance of establishing and maintaining market mechanism to ensure transparency and accountability and minimize potential corruption.

4. Funding of Bank projects (in particular Bank loans) is controlled and monitored by MOF and its extension offices (finance bureaus at provincial, municipal/prefecture, and county levels). However, project activities are carried out by implementing agencies of a specific industry or sector because they have the expertise required. This arrangement usually requires extensive coordination because the multiple levels of management of funding and implementation sometimes work to the detriment of smooth project implementation.

RISK ANALYSIS

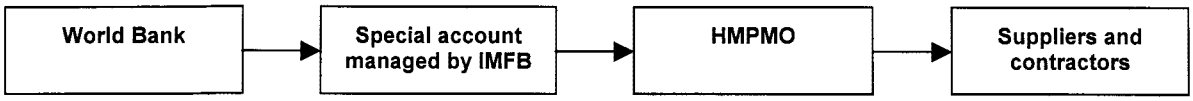
5. The following risks and corresponding mitigating measures have been identified:

Risk	Risk Rating	Mitigating Measures
I. Inherent Project Risk	Moderate	This is the first Bank–financed project that HMPMO will execute, and the financial staff have no Bank experience. The task team will monitor the project closely from the initial stage, and a training program was implemented in August 2004 with help from the financial management specialist from the Bank office in Beijing.
II. Control Risk		
Implementing Entity	Moderate	Close monitoring by the task team is needed to ensure the implementing entity is familiar with Bank procedures and requirements.

Risk	Risk Rating	Mitigating Measures
Funds Flow	Low	The Bank loan will be managed by IMFB, which had experience with several Bank projects before and is qualified to handle this project.
Staffing	Moderate	Because all the financial staff have no Bank experience, training was provided after pre-appraisal, and close monitoring and supervision will be performed by the task team throughout the implementation process.
Accounting Policies and Procedures	Low	Accounting policies and procedures are already in place.
Internal Audit	Moderate	HMPMO has hired an individual internal auditor to monitor and inspect the work of the financial functions periodically. For efficiency and effectiveness, no assessment will be made on this person's competency and the task team will rely on external audits and Bank supervision reviews.
External Audit	Low	The external auditor, China National Audit Office (CNAO), has extensive audit experience with Bank projects.
Reporting and Monitoring	Low	Format of financial statements and frequency of submission have been clearly defined by the Bank and MOF.
Information Systems	Low	HMPMO will use the computerized financial management system User Friend (Yong You). The task team will monitor the processing of its accounting work closely during the initial stage and subsequent regular supervision missions.

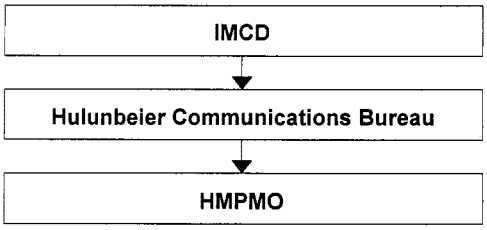
FUNDS FLOW

6. Funding for the project includes the Bank loan and counterpart funds. Counterpart funds will be loans from local banks and government appropriations and will be provided to HMPMO through IMCD. One special account will be set up and managed by the IMFB. The funds flow is depicted below.



IMPLEMENTING ENTITY AND STAFFING

7. This project is headed by IMCD and will be implemented by HMPMO, which was established specifically for this project. HMPMO is headed by the deputy director of Hulunbeier Communications Bureau. Experienced staff from various bureaus of Hulunbeier has been assigned to support HMPMO.



8. HMPMO will be responsible for:

- Managing, monitoring, and maintaining project accounting records;
- Retaining original supporting documents for project activities;
- Preparing financial statements and submitting them regularly to the Bank for review and comment.

9. Adequate project accounting staff with educational background and work experience commensurate with the work they are expected to perform is one of the factors critical to successful project financial management. On the basis of discussions, observation, and review of the educational background and work experience of the staff identified for financial and accounting positions in HMPMO, the financial management specialist finds that the staffs are qualified and appropriate to the work they are expected to assume.

10. Because most of the financial staff is new to Bank projects, IMCD's project implementation plan includes a training program for financial and accounting staff on the following topics:

- Bank's financial management policy and disbursement procedures
- Fund, asset, and contract management
- Format and content of project financial statements
- Audit requirements.

11. The task team recommended that a project financial management manual be prepared providing detailed guidelines on financial management, internal controls, accounting procedures, fund and asset management, and withdrawal application procedures. Preparation of the manual was supported fully by Bank staff , who reviewed and commented on draft versions. The manual will be finalized after negotiations and the final version distributed to all financial staff before project start-up.

ACCOUNTING POLICIES AND PROCEDURES

12. The administration, accounting, and reporting of the project will be set up in accordance with MOF Circular 13 of January 2000, Accounting Regulations for World Bank Financed Projects. The standard set of project financial statements includes the following statements:

- Balance sheet
- Statement of source and use of funds for each component
- Statement of implementation of loan agreement
- Statement of special account.

13. The unaudited project financial statements will be submitted to the Bank semiannually (by August 15 and February 15).

Audits

14. *Internal audits.* Although HMPMO has assigned an individual internal auditor to monitor and inspect the financial functions periodically, we have not assessed and will not assess the competency of the internal audit because the costs of doing so outweigh the benefits. Therefore, work performed by the internal auditor will not be used. However, we will review internal audit reports during supervision to identify issues for consideration and support the development of the internal audit function.

15. *External audits.* Project financial statements must be audited in accordance with standards acceptable to the Bank. Like other Bank-financed projects in China, this project will be audited in accordance with International Auditing Standards and the Government Auditing Standards of the People's Republic of China. The Audit Bureau of Inner Mongolia Autonomous Region has been identified as auditor for the project and will issue annual audit reports, which will be subject to review by the China National Audit Office. The annual audit reports of project financial statements will be submitted to the Bank by HMPMO within 6 months of the end of each calendar year (by June 30).

16. *Supervision.* A detailed supervision plan for this project is included in the China Audit Strategy document. This document will take into consideration the size of the project and the risks identified.

Information System

17. HMPMO will use the computerized financial management system User Friend (Yong You), a well-established accounting software package approved by MOF for this project. The task team will monitor the processing of accounting work closely, especially in the initial stage to ensure complete and accurate financial information will be provided in a timely manner.

PROCUREMENT ARRANGEMENTS

18. The thresholds set for procurement post-review will be consistent with those for statements of expenditures (SOE) for disbursement. The financial management specialist and procurement staff should participate in supervision missions to ensure that contracts are awarded in line with Bank procurement guidelines and that contract payments are in accordance with the terms of the contract and well supported.

DISBURSEMENT ARRANGEMENTS

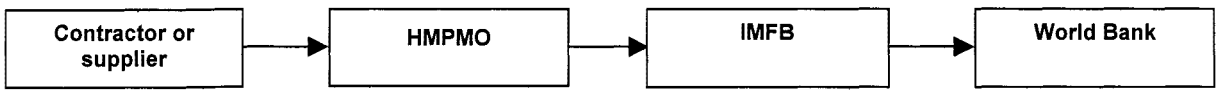
19. The project will disburse using traditional disbursement techniques. Bank loan proceeds will be disbursed against eligible expenditures as follows:

- Civil works:
  - 44% of expenditures for HMH component
  - 40% for buildings expenditures
  - 40% for traffic engineering
  - 38% for expenditures under the BRFT component
- Equipment—100 percent of foreign expenditures, 100 percent of local expenditures (ex-factory), and 75 percent of other items procured locally,
- Consulting service—91 percent of expenditures, and
- Training—100 percent of expenditures.

20. Disbursement methods, such as replenishment, direct payment, and special commitment, are available for the project. SOE limits will be set in line with the following post-review thresholds: (i) all contracts for goods estimated to cost the equivalent of $400,000 or less; (ii) all contracts for civil works estimated to cost the equivalent of $4 million or less (iii) consultant contracts estimated to cost $100,000 for firms; (iv) all training.

21. One special account will be established at and maintained by IMFB. The authorized allocation of the special account will not exceed US$6 million equivalent (about 4 months of eligible expenses). The initial authorized allocation from the Bank will be US$4.0 million until the aggregate withdrawals and outstanding special commitments equal or exceed US$12.0 million equivalent. Bank funds will be disbursed to the special account set up at HMPMO, and then to suppliers and contractors.

22. IMFB will be directly responsible for the management, monitoring, maintenance, and reconciliation of the special account activities. Supporting documents required for Bank disbursements will be prepared by HMPMO and submitted to IMFB for verification and approval before they are sent to the Bank. The flow of withdrawal applications is as depicted below.



FINANCIAL COVENANTS

23. In addition to the standard financial covenants described in the legal document, specific financial covenants (if any) applicable to the project are detailed in section C of the project appraisal document.

RETROACTIVE FINANCING

24. Retroactive financing of up to US$3 million will be applied to civil works expenditures made after August 1, 2004 for the first package of BRFT component and some testing and quality control equipment.

Annex 8: Procurement

CHINA: Inner Mongolia Highway and Trade Corridor Project

GENERAL

1. Procurement for the proposed project will be carried out in accordance with the World Bank's Guidelines: Procurement Under IBRD Loans and IDA Credits dated May 2004, and Guidelines: Selection and Employment of Consultants by World Bank Borrowers dated May 2004, and the provisions stipulated in the legal agreement. The general description of various items under different expenditure categories are described below. For each contract to be financed by the loan, the procurement or consultant selection method, the need for prequalification, estimated costs, prior review requirements, and time frame were agreed between the borrower and the Bank task team, as shown in the procurement plan. The procurement plan will be updated at least annually or as required to reflect actual project implementation needs and improvements in institutional capacity.

2. *Procurement of Works.* Works to be procured under this project include: i) 8 contracts with an average contract value of about US$18 million for Hailar–Manzhouli Highway (HMH) under ICB procedures in one bidding activity; ii) 14 contracts with an average contract value of about US$3.5 million for highway network improvements, iii) 3 contracts for HMH's traffic engineering, and iv) 3 contracts for buildings, all under NCB procedures on a slice-and-package basis. Procurement will use the Bank's standard bidding documents (SBD) for ICB contracts, and the Bank-approved Chinese model bidding documents (MBD) (dated May 1997 and issued by MOF) for NCB contracts. Revisions to the Bank SBDs since 1997 will be incorporated into MBDs.

3. *Procurement of Goods.* Goods to be procured under this project include: i) two contracts for road maintenance equipment under ICB procedures; and ii) vehicles, testing equipment, and office equipment for the borrower's capability strengthening to be procured through NCB or Shopping procedures. Procurement will use the Bank's SBD for ICB and the Bank-approved Chinese MBD for NCB contracts. Revisions to the Bank SBDs since 1997 will be incorporated into MBDs.

4. *Procurement of non-consulting services.* [Not Applicable]

5. *Selection of Consultants and Training.* Consulting services will be required for HMH construction supervision and staff training to be implemented under the IST component. HMS construction supervision (one assignment) with an estimated amount of about US$780,000 will be procured through quality- and cost-based selection (QCBS). Training including small assignments for contracts of less than $100,000 each will be procured in accordance with the provisions of paragraphs 3.7 through 3.8 of Consultant Guidelines. In addition, individual consulting services, if any, will apply the provisions of paragraphs 5.1 through 5.4 of Consultant Guidelines. The Standard Request for Proposals (May 2004) will be used. Short lists of consultants for services estimated to cost less than $300,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraphs 2.6, 2.7 and 2.8 of the Consultant Guidelines.

6. *Operational Costs.* [Not Applicable]

7. *Others.* [Not Applicable]

ASSESSMENT OF THE AGENCY'S CAPACITY TO IMPLEMENT PROCUREMENT

8. Procurement activities will be carried out by the Hai–Man Project Management Office (HMPMO). The agency is staffed with 10 experienced engineers as of May 2004 and more will be hired with the progress of the project. The procurement unit is staffed with four procurement officers in HMPMO. However, some experienced staffers from the Foreign Capital Utilizing Office of IMCD and the

procurement agent CNTIC who have experience in Bank-financed projects have been supporting HMPMO's procurement since the early stages of this project.

9. A capacity assessment of the implementing agency to implement procurement actions for the project was carried out in April and May 2004. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement and the IMCD's relevant central unit for administration and finance.

10. Most of the issues and risks concerning procurement for project implementation have been identified. They include: i) HMPMO was established specifically to manage the proposed project and, as any new organization, might experience a learning curve period; ii) Bank procurement policies and procedures, especially new features of electronic bidding and publishing contract award information, are new to most HMPMO staff members, although a few transferred from previous Bank-financed projects; iii) HMPMO's communication skills in English is weak; iv) Non-local bidders may not be interested in the proposed NCB bidding because of the severe winter climate in the area; and v) Severe climate conditions make the construction period short and supervision difficult.

11. The corrective measures that have been agreed on are: i) The Foreign Capital Utilizing Office of IMCD and HMPMO's procurement agent, CNTIC, which both have enough experience in handling the Bank's ICB and major procurement activities, will support the HMPMO from the early stages of the project; ii) The procurement manual describing all the procurement procedures to be followed and the clear responsibility of each unit shall be distributed to all concerned staff of HMPMO and IMCD. Specific training and periodic training on the Bank's procurement policies and project management will be arranged by HMPMO for its procurement staff; iii) HMPMO will organize English training courses for its procurement staff to improve their communication skills in English; iv) Specific training on the Bank's SBDs will be arranged by HMPMO for bidders; and v) In addition to local supervision training by an international consulting team, an overseas study tour and training program will be implemented.

12. The overall project risk for procurement is **AVERAGE**.

PROCUREMENT PLAN

13. The Borrower, at appraisal, developed a Procurement Plan for project implementation which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the task team on August 15, 2004. and is available at the HMPMO's office in Hulunbeier, Inner Mongolia (Attachment 1). Should be deleted It will be available in the Project's database and posted in the Bank's external website after the Loan approval. The Procurement Plan will be updated in agreement with the task team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

FREQUENCY OF PROCUREMENT SUPERVISION

14. In addition to the prior review supervision to be carried out by Bank officers, the capacity assessment of the implementing agency has recommended a supervision mission to visit the field every six months to carry out post-review of procurement actions when some procurement activities have been carried out, or when some post-review contracts have been signed and implemented during the review period.

Table A: Project Costs by Procurement Arrangements (US$ million equivalent)

Expenditure Category	Procurement Method[1]				Total Cost
	ICB	NCB	Other[2]	N.B.F.	
1. Works	164.27	67.86	0.00	1.80	233.93
	(71.21)	(25.32)	(0.00)	(0.00)	(96.53)
2. Goods	1.13	0.20	0.30	2.99	4.62
	(1.13)	(0.20)	(0.30)	(0.00)	(1.63)
3. Services	0.00	0.00	1.36	5.64	7.00
	(0.00)	(0.00)	(1.34)	(0.00)	(1.34)
4. Miscellaneous	0.00	0.00	0.00	16.61	16.61
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
5.Front-end fee	0.00	0.00	0.50	0.00	0.50
	(0.00)	(0.00)	(0.50)	(0.00)	(0.50)
Total	165.40	68.06	2.16	27.04	262.66
	(72.34)	(25.52)	(2.14)	(0.00)	(100.00)

[1]Figures in parentheses are the amounts to be financed by the {Loan/Credit/Trust Fund}. All costs include contingencies.

[2] Includes civil works and goods to be procured through national shopping, consulting services, training, and technical assistance services.

Table A1: Consultant Selection Arrangements (optional) (US$ million equivalent)

Consultant Services Expenditure Category	Selection Method						
	QCBS	QBS	SFB	LCS	CQ	N.B.F.	Total Cost[1]
A. Firms	0.78	0.00	0.00	0.00	0.58	5.64	7.00
	(0.76)	(0.00)	(0.00)	(0.00)	(0.58)	(0.00)	(1.34)
B. Individuals	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Total	0.78	0.00	0.00	0.00	0.58	5.64	7.00
	(0.76)	(0.00)	(0.00)	(0.00)	(0.58)	(0.00)	(1.34)

[1] Including contingencies

Note: QCBS = Quality- and Cost-Based Selection
QBS = Quality-based Selection
SFB = Selection under a Fixed Budget
LCS = Least-Cost Selection
CQ = Selection Based on Consultants' Qualifications
N.B.F. = Not Bank-financed
Figures in parentheses are the amounts to be financed by the Bank Loan.

Table B: Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value Threshold (US$ thousand)	Procurement Method	Contracts Subject to Prior Review (US$ million)
1. Works	Equal to or more than 15,000	ICB, prior review	164.27
	Less than 15,000 but equal to or more than 4,000	NCB, prior review	0.00
	Less than 4,000	NCB, post review	67.86
2. Goods	Equal to or more than 400	ICB, prior review	1.13
	Less than 400 but equal to or more than 100	NCB, post review	0.20
	Less than 100	Shopping, post review	0.10
3. Services	Equal to or more than 100 (firms)	QCBS	0.78
	Less than 100 (firms)	Other, post review	0.00
Total value of contracts subject to prior review:		$166.18 million	
Overall Procurement Risk Assessment:		Average	
Frequency of procurement supervision missions proposed:		One every 6 months (includes special procurement supervision for post-review/audits)	

Table C: Allocation of Loan Proceeds

Expenditure Category	Amount in US$ million	Financing Percentage
Works		
HMH civil works	63.50	44%
Buildings	1.39	40%
Traffic Engineering	3.63	40%
Border Roads for Trade	18.00	38%
Goods	1.60	100% of foreign expenditures, 100% of local expenditures (ex-factory costs) and 75% of local expenditures for other items procured locally
Consultant's Services	0.76	91% of foreign expenditures
Training	0.57	100%
Unallocated	10.05	
Front-end fee	0.50	100%
Total	100.00	

Annex 9: Economic and Financial Analysis

CHINA: Inner Mongolia Highway and Trade Corridor Project

ECONOMIC EVALUATION

Preface

1. The economic evaluation of the project covers the following three project components:
   a. Construction of the a 177 km Hailar - Manzhouli class I highway (HMH).
   b. Upgrading and improvement of five roads (435 km) which have been identified either as a key linkage of the smaller inland ports for international trade with Russia and Mongolia and/or as a critical link to the local highway network under the border roads for trade (BRFT) component.
   c. The development of a cargo transfer terminal (CTT) at Hailar.

2. The analysis is based on the actual and forecast data on traffic volume, vehicle operating cost, user's time cost savings, accident reduction cost and economic project cost. The main inputs for the evaluation are:
   a) capital investment and maintenance costs, reflecting September 2004 prices;
   b) the benefit stream, also reflecting September 2004 prices, that comprises of savings in VOC, travel time savings, and reduction in accident costs;
   c) a capital investment period from 2005-2009 and an evaluation of benefits period of 20 years, and
   d) full benefits starting to accrue in 2008 for HMH and CTT, and 2007 or 2008 depending on the construction completion of those roads under the BRFT component.

Hailar–Manzhouli Highway (HMH)

3. **Overview**. The Inner Mongolia Autonomous Region (IMAR) has a vast land area of 1.18 million km^2. It is an inland transport hub located in the northern region of China serving the east-west corridor linking China's western provinces to the coastal areas in the east. Hulunbeier League (the project site) is the second largest league of the region (about a quarter million square km or about the size of the UK). This league bridges Russia and Mongolia with the other two northeastern provinces of China, Heilongjiang and Jilin.

4. The national highway route 301(NR301) has a total length of 1,436 km, 611 km of which running through Hulunbeier and the remaining 825 km passing through Heilongjiang province. The highway is the most important East-West transport corridor for the entire northeastern region of China. The NR301 starts from Suifenhe, and town in Heilongjiang Province in the east, to Manzhouli, the land port bordering Russia on the west. GOC recently approved a plan to upgrade the entire NR301, whereby the section in Heilongjiang province has already been upgraded to an expressway standard. The upgrading works of NR301 in Hulunbeier has recently been started and the proposed HMH is the last and western most portion of the NR301. In Hulunbeier, more than half of its population lives along the NR 301. The proposed HMH will improve accessibility for local peoples to the outside world as well as to help balance the economic development within the IMAR. Given the important role of the highway corridor to the local economy, the proposed project has the highest priority in Inner Mongolia's regional highway development plan.

5. **Current Condition of HMH Corridor (without project)**. The pavement condition of the existing road is very poor, resulting in low speeds and high safety risks. The growth of motorized traffic between 1995 and 2003, an average of 12.9 percent per year, rendered a traffic of about 2,300–4,500 motorized vehicles per day in 2003. Non-motorized and other traffic (bicycles, animal carts, small farm tractors, motorcycles, etc.) added another 150–200 vehicles per day. Even with a modest projected 10.8 percent future annual growth, motorized traffic will reach 3,700–7,300 vehicles per day by 2008, the

planned opening year of the HMH. With the total capacity for the existing Class III standard roads at 2,300 to 3,500 vehicles per day, the optimum timing for construction of the new road is now.

Normal Traffic, by Sections (ADT)

		Section 1 Hailar–Wuzhour	Section 2 Wuzhour–Jalainur	Section3 Jalainur–Manzhouli
Road length in km (old road / new road)		60 / 57	125 / 105	16 / 15
Road class (old road / new road)		III / I	III / I	III / I
Road condition (old road / new road)		Poor / Good	Poor / Good	Poor / Good
Terrain		Flat	Flat	Flat
Capacity (ADT/day) (old road / new road)		2,300/ 35,000	2,300 / 35,000	3,500 / 35,000
Traffic on existing road (ADT)				
	1995	1,323	867	1,758
	2000	2,300	1,525	3,105
	2001	2,632	1,709	3,543
	2002	3,006	1,928	3,975
	2003	3,604	2,288	4,520
Traffic with the project:				
a. Existing road	2008	2,284	1,336	3,059
	2018	4,066	2,141	4,840
	2028	5,936	2,792	6,061
b. New HMH	2008	4,003	2,407	4,305
	2018	8,900	4,824	8,285
	2028	12,989	6,283	10,386

Sources: IMCD and Bank staff

6. **The estimated Traffic Growth on the HMH corridor**. IMCD's estimates of traffic on HMH were made on the basis of routine traffic counts and a comprehensive origin and destination (O/D) survey that took place on June 2001 (updated on October 2002 and December 2003). Those forecasts were further reviewed and confirmed by an independent transport institute in Beijing to review regional transport demand and traffic on this highway corridor. Projections of normal, generated and diverted traffic were made for 18 zones on the basis of a conventional growth model. The traffic on the proposed HMH includes diversion from the existing road. Given the historical trend on economic growth of Hulunbeier was 9.7 percent during 1995-2002 and the current forecasts in coming years (about 9-10 percent), the projected traffic growth rates in the project corridor are estimated to be 10.8 percent per year between 2003 - 2008, 6.6 percent between 2008-2018, and 3.0 percent between 2018-2028. The overall traffic growth rates are summarized as follows:

Annual Traffic Growth Rate (actual and projection)

		Car	Bus & Truck	Average
Actual:	1995-2003	13.7%	11.7%	12.9%
Projection:	2003-2009	10.9%	10.7%	10.8%
	2009-2019	6.9%	6.1%	6.6%
	2019-2029	3.0%	3.0%	3.0%

Sources: The IMCD and the Bank staff.

7. **Alignment Alternatives.** The HMH feasibility study considered and compared five alternative route alignments between Hailar and Manzhouli. It takes into consideration the local economic development, the shortest traveling route, the lowest engineering cost and coordination with the entire highway networks. The preferred alignment was selected because of its least overall cost, higher EIRR and better coordination with the local economic development plan and local / national transport networks. Details are available in the feasibility study reports.

8. **Estimated Traffic on the Highway (with project).** The HMH is planned to become operational in 2008. Diversion ratios of the corridor traffic on HMH are based on the information provided by the O/D survey and the traffic studies, . They were calculated by using financial VOC for the road users, with the impacts of the level of proposed tolls on the new highway, travel distance, and experience from other recently Bank financed highways in China. The results of the analysis indicate that between 59 - 64 percent of motorized vehicles in 2008, depending on the road section, may be diverted to the new highway. The traffic diversion is expected to increase linearly in the first ten years to reach 63 – 69 percent by the year 2018 and stabilize thereafter.

9. Traffic generated by the new highway is assumed to be 10 percent of the normal traffic. This assumption is consistent with the experience on other recent highway projects in China. To be on a conservative side, this economic analysis did not take into consideration possible traffic diversion from railway to the new highway, although Manzhouli is linked by rail to Hailar. The highway corridor traffic forecast, by sections, is summarized as follows:

Normal Traffic, by Sections (ADT)

		Section 1 Hailar - Wuzhour	Section 2 Wuzhour - Jalainur	Section3 Jalainur - Manzhouli
Traffic on the existing road:	1995	1,323	867	1,758
	2000	2,300	1,525	3,105
	2001	2,632	1,709	3,543
	2002	3,006	1,928	3,975
	2003	3,604	2,288	4,520
Traffic without the project:				
	2008	6,287	3,743	7,364
	2018	12,966	6,965	13,125
	2028	18,925	9,075	16,447
Traffic with the project:				
a. Traffic on the existing road	2008	2,284	1,336	3,059
	2018	4,066	2,141	4,840
	2028	5,936	2,792	6,061
b. Traffic on the new HMH	2008	4,003	2,407	4,305
	2018	8,900	4,824	8,285
	2028	12,989	6,283	10,386
c. Traffic diversion (in %)	2008	63.7%	64.3%	58.5%
	2018	68.6%	69.3%	63.1%
	2028	68.6%	69.2%	63.1%

Sources: IMCD and the Bank staff.

10. **Economic Costs.** Investment costs have been converted to economic costs by the elimination of price contingency, taxes, custom duty on imported materials and by the application of shadow price factors. The resulting overall economic cost is about 96 percent of the financial cost.

11. **Economic Benefits.** Project benefits were estimated by using the VOC equations developed by the Highway Design and Maintenance Model (HDM-III). The economic analysis includes the benefits derived from: (i) VOC savings on the new highway for normal and generated traffic, (ii) time savings through relieved congestion on the existing road, and (iii) lower accident costs. The benefits resulting from the lower level of congestion were quantified. The value of passenger time savings was estimated at RMB 1.50 per passenger hour, on the basis of updated values from a report on feasibility study methodology for highways in China (Rust PPK, Australia Feasibility Study Methodology Report, May 1996). The same sources were used for vehicle accident rates on different classes of roads.

Economic Vehicle Operating Costs (RMB per km, September 2004 prices)

Type of Vehicle	Old Road	New Road
Car	0.685	0.797
Medium bus	1.324	1.768
Large bus	2.378	3.100
Small truck	1.000	1.109
Medium truck	1.484	1.750
Large truck	2.118	2.463
Tractor/trailer	3.526	4.011

Accident Rates and Costs in China

Road class	Accidents per 100 million vehicle km	Damage (RMB/ accident)
Expressway	-40 + 0.005 AADT	12,000
Motorway Class I	37 + 0.003 AADT	9,000
Motorway Class II	83 + 0.0065 AADT	7,000
Highway Class II	133 + 0.007 AADT	6,000
Highway Class III	140 + 0.03 AADT	4,000

Source: Table E4.1, page E21, Rust PPK. Australia Feasibility Study Methodology Report, May 1996.

12. The EIRR, sensitivity tests and switching values of HMH are summarized as follows:

EIRR, Sensitivity Tests and Switching Values of HMH

	EIRR (%)	NPV (12%, RMB million)
Estimated EIRR		
Hailar–Wuzhour	20.5	382.6
Wuzhour–Jalainur	13.5	99.2
Jalainur–Manzhouli (border)	10.7	(22.3)
Whole route	15.7	484.4
Sensitivity test		
Delay the completion by one year	14.8	382.2
Higher capital cost (+10%) (a)	14.4	335.4
Lower benefits (-10%) (b)	14.3	286.9
Combine (a) and (b)	13.2	162.8
Zero value of passenger time	14.5	318.4
Zero generated traffic	15.1	402.5

Lower traffic projection (-15%)	14.1	258.0
Switching values	% increase	
Cost increase to reduce EIRR to 12%	139%	
Benefit reduction to reduce EIRR to 12%	72.0%	

Border Roads For Trade Component

13. There are five roads under BRFT. The current conditions of the five roads have been classified by IMCD as among the worst in the district. The standards of these roads are very low, and most do not even have proper pavement. The relatively heavy daily traffic is accelerating the deterioration of the road surface. Most of the roads are inaccessible during rainy days and the snow season. This adds travel distance and time for its users. The main objective of the rehabilitation program is to upgrade the road class to all-weather accessibility.

14 The current traffic levels of the five roads are in the range of 300–1,000 ADT. Because the five roads are located in the same district, the local economic development and traffic patterns are similar. All the five roads pass through very lightly populated areas, traffic growth rates have been estimated conservatively at 1.0 percent from 2000 to 2005, and reduced by .05 percent for each of the 5 years from 2005 to 2015. The generated traffic is assumed to be 5 percent of the normal traffic.

15. Similar to the HMH, the VOC equations were used to quantify the economic costs and analyze benefits of the five road. The main evaluated benefits would be reduced VOCs through the providing of a better road surface, and the associated upgrading of road class would also result in higher traffic speeds, improvement of road roughness index and a shorter average transport distance ensured by all-weather conditions.

16. The best estimates of EIRRs for the five roads range from 16.3 percent to 28.9 percent. The overall EIRR and NPV (12 percent) for the BRFT is 21.3 percent and RMB 318.3 million respectively. The results of economic evaluations are summarized below:

EIRR and NPV of BRFT

	Length (km) (old/ new)		ADT 2003	Terrain	Road class (old/ new)	EIRR (in %)	NPV (12%, RMB million)
Dayangshu–Baihuapai	72.0	70.5	1,022	Hilly	III/ II	28.9	181.1
Zhalannuoer–Heishantou	138.0	138.0	366	Flat	U/ III	16.3	49.4
Yiminsumu–Handdagai	103.0	103.0	378	Hilly	U/ III	17.3	43.3
Alatanelemo–Arihashate	82.5	82.5	292	Flat	IV/ III	23.6	44.3
Amugulong–Erbuduge	21.0	19.3	298	Flat	U/ III	20.4	12.4
Total	416.5	413.3				21.3	318.3

U: Unclassified road.

17. The risks considered for economic evaluation include:

- slower than projected growth of traffic;
- higher than project cost of civil works; and
- lower than expected VOC savings.

All these risks were analyzed through sensitivity tests and the evaluation results were found to be robust for all of them. For the project component to be non-acceptable (i.e. an EIRR lower than 12 percent or a nil NPV at 12 discount rate), the benefits would have to fall to less than 20 percent of those in the base

case with no change in costs, or the costs would have to increase to more than 1.81 times those of the base costs, or the costs would have to increase by 30 percent and the benefits fall to 50 percent at the same time.

18. Additional benefits expected from the project, but not included in the EIRR calculation, are: increase in the income of poor rural farmers, because of better access to town markets and jobs, and increased accessibility to schools and hospitals. The quantifiable beneficiaries are estimated at (a) about 800 extra children attending school (about 10% percent of total 88,700 children in the direct road service areas) and (b) 1,300 extra people receiving health services (1 percent of 128,900). Such extra benefits are summarized below:

Additional Social Benefits of the BRFT Component

		Extra children attending school/ year	Extra people attending health services/ year
1	Chen Barag Qi	400	600
2	Xin Barag Zuoqi	200	400
3	Xin Barag Youqi	200	300
	Total	**800**	**1,300**

Sources: IMCD and the Bank staff.

Trade Facilitation Component

19. **Overview:** IMCD is planning to build a cargo transfer terminal (CTT) at Hailar. The proposed facilities will also include customs clearance services which will reduce the business pressure of the land port at Manzhouli. The investment will enhance the service level for the fast growing trade demand among China, Russia and Mongolia. The CTT will be able to provide more flexible, reliable and safe services to trade. Experience with Bank activities elsewhere found that effectively addressing the trade facilitation and port efficiency issues would contribute positively to reducing import price.

20. The economic evaluation focus on the gains derived from the efficiency improvement because it is representing the majority of quantifiable benefits of the component. The direct benefits of the CTT is the reduction of the travel time, waiting time for cargo and passenger traffic at the land port of Manzhouli. In 2003, the average highway waiting at Manzhouli was about 30 minutes, eight minutes longer than in 1995. For the railway, the average processing time increased from 10 minutes to 15 minutes during the same period. The majority of the increase in service time occurred from 2000- 2003 due to fast increases in traffic volume. At Manzhouli, the total traffic volume has increased by 24.6 percent per annum for cargo traffic and 16.9 percent per annum for passenger traffic. It is estimated that the annual growth of cargo and passenger traffic will be 9.2 percent and 11.4 percent, respectively, during 2003 –2010; 4.8 percent and 5.1 percent, respectively, during 2010-2020.

Total Traffic Volume at Manzhouli

	1995	2000	2003	2010	2020	2000-03 pa	2003–10 pa	2010-20 pa
Cargo ('000 ton)	2,883	5,873	11,350	21,000	33,500	24.6%	9.2%	4.8%
Passenger ('000 person)	314	882	1,409	3,000	4,950	16.9%	11.4%	5.1%

Source: IMCD and Bank staff estimate

21. With the project, despite the increasing traffic volume, it is estimated that the processing time and waiting time at Manzhouli in 2010 will remain at the 2000 level. The CTT is planning to begin operations in 2008. Total first-year benefits are estimated at RMB 5.95 million and most benefits (about

90 percent) accrue to cargo traffic. The EIRR and NPV (at 12 percent) for CTT are estimated to be 24.5 percent and RMB 32.9 million, respectively.

OVERALL ECONOMIC EVALUATION

22. The overall EIRR of the project (including HMH, BRFT and CTT) is 17.0 percent and the NPV (at 12 percent) is RMB 835.5 million.

23. *Project Risks.* Most sections of the HMH and BRFT show acceptable economic returns. IMCD has extensive experience in the construction and operation of high-grade highways and rural road projects, which minimizes the technical risks associated with the implementation of the project. The main tangible risk is that prolonged delays will affect the construction schedule. The impact of uncertainty was tested through the probabilistic risk analysis.

24. *Probabilistic Risk Analysis.* Because the cost of BRFT and CTT constitutes only about 24 percent of total capital investment and their EIRRs are higher than that of HMH, the probabilistic risk analysis for the project focused on the construction of HMH. The highest uncertainty factors associated with the economic evaluation of HMH have been identified as: (i) traffic growth rate, (ii) traffic diversion rate to the new expressway, (iii) value of VOC, (iv) changes in capital investment, and (v) delay of the opening by one year. The results of the probabilistic risk analysis show that the EIRR is 14.5 percent for the most likely scenario, 10.2 percent for the low scenario, and 20.6 percent for the high scenario. The standard error of the mean is 0.3 percent. The detailed results of the Monte Carlo test and probabilistic risk analyses summarized as follows:

Summary of HMH Probabilistic Risk Analyses

	Range of EIRR (%)	Most likely EIRR (%)	Standard error of the mean (%)
Section 1: Hailar – Wuzhour	10.7–29.0	19.8	0.5
Section 2: Wuzhour – Jalainur	10.8–14.4	12.0	0.5
Section 3: Jalainur – Manzhouli (border)	5.6–15.2	9.6	0.3
Total HMH	10.2–20.6	14.5	0.3

Financial Evaluation of IMCD

25. IMCD's financing plan has two main features: an emphasis on new construction and an increase in maintenance expenditures, which depend largely on grants from MOC. Although IMCD budgeted a large grant from MOC, a moderate self-financing ratio (total internal cash generation against total revenue) for 2006–2010 (27.3 percent) will ensure the implementation of the development plan even without the grant from MOC. This ratio has improved since the 2001–2005 period (21.9 percent).

26. In terms of the long-term sustainability of road maintenance with the resources allocated, the average yearly increase in maintenance expenditures during the 2001–2005 period (3.1 percent) exceeded the growth of the road network (2.8 percent), which means a net increase in the average maintenance expenditure per kilometer. The trend should continue during the 2006–2010 period (see revenue and expenditures table below:

Inner Mongolia Highway Revenue and Expenditure During its 10th and 11th FYP (RMB million)

	2001	2002	2003	2004	2005	Total	2006	2007	2008	2009	2010	Total
Revenue:												
1 Road maintenance fee	1,065	1,130	1,014	1,232	1,294	5,735	1,359	1,427	1,598	1,673	1,812	7,869
2 MOC subsidy	1,133	1,051	2,123	3,538	3,500	11,345	3,500	3,500	3,500	3,500	3,500	17,500
3 Tolls revenue	154	285	366	900	1,200	2,905	1,600	1,650	1,700	2,100	2,500	9,550
4 Bank loan	3,067	3,248	4,077	4,400	4,700	19,492	5,000	6,000	6,000	6,000	6,000	29,000
Total	**5,419**	**5,714**	**7,580**	**10,070**	**10,694**	**39,477**	**11,459**	**12,577**	**12,798**	**13,273**	**13,812**	**63,919**
Expenditure:												
1 New construction	2,567	2,793	4,180	6,380	6,702	22,622	7,163	7,869	7,470	7,592	7,613	37,707
2 Rehabilitation	1,992	1,860	2,292	2,473	2,677	11,294	2,886	3,184	3,662	3,893	4,238	17,863
3 Routine maintenance	346	388	392	442	476	2,044	504	544	608	645	725	3,026
4 Local maintenance	88	82	89	96	104	459	112	121	131	141	152	657
5 Administration and study	8	8	8	10	12	46	14	16	18	20	22	90
6 Management	212	263	285	307	332	1,399	358	387	418	451	488	2,102
7 Other expenditures	83	86	92	100	108	469	116	126	136	147	158	683
8 Repayment of interest and principle	123	234	242	262	283	1,144	306	330	355	384	416	1,791
Total	**5,419**	**5,714**	**7,580**	**10,070**	**10,694**	**39,477**	**11,459**	**12,577**	**12,798**	**13,273**	**13,812**	**63,919**
Total Road Network (km) -(a)	70,408	72,673	75,705	77,896	80,896	377,578	84,340	87,367	95,676	96,876	100,000	464,259
Average annual increase in road network	**--**	**3.2%**	**4.2%**	**2.9%**	**3.9%**	**2.8%**	**--**	**3.6%**	**9.5%**	**1.3%**	**3.2%**	**3.5%**
Total maintenance expenditure (million Yuan) -(b) /_1	434.00	470.00	481.00	538.00	580.00	2,503.00	616.00	665.00	739.00	786.00	877.00	3,683.00
Average unit maintenance. expenditure ('000 Y/km)-(b)/(a)	6.16	6.47	6.35	6.91	7.17	6.63	7.30	7.61	7.72	8.11	8.77	7.93
Average annual increase in maintenance expenditures	**--**	**4.9%**	**-1.8%**	**8.7%**	**3.8%**	**3.1%**	**1.9%**	**4.2%**	**1.5%**	**5.0%**	**8.1%**	**3.7%**

/_1: Sum of routine and local maintenance.

/_2: Actual 2001-2003; forecast: 2004-2005, and 2006-2010.

Fiscal Impact of the HMH, BRFT and CTT Investment

27. IMCD budget forecasts show that the investment and maintenance/ operation of the HMH, BRFT and CTT components in the project constitutes only a small fraction of IMCD's fund flow. Based on IMCD's plan, the capital investment of BRFT and CTT will require less than 2.0 percent of the projected annual total IMCD revenue. In addition, the required maintenance and operation expenditure of BRFT and CTT is less than one percent of the total maintenance expenditure of IMCD. These low ratios indicate that the project presents a modest financial risk as regards the availability of a counterpart funding for the construction and maintenance of the project roads. These figures are summarized as follows:

IMCD: Investments, Revenue and Maintenance Expenditures (RMB million)

	2005	2006	2007	2008	2009	2010
Investments and Revenue:						
BRFT and CTT Investments (a)	216.92	213.50	45.92	-	-	-
Total IMCD Revenue (b)	10,694.00	11,459.00	12,577.00	12,798.00	13,273.00	13,812.00
Ratios (a)/(b)	2.0%	1.9%	0.4%	-	-	-
Maintenance/ operating Expenditures						
BRFT and CTT (c)		-	2.36	4.32	4.48	4.75
Total IMCD Maintenance Expenditure (d)		616.00	665.00	739.00	786.00	877.00
Ratios (c)/)d)		-	0.4%	0.6%	0.6%	0.5%

Sources: IMCD and Bank staff

Annex 10: Safeguard Policy Issues

CHINA: Inner Mongolia Highway and Trade Corridor Project

ENVIRONMENT

Background

1. The Chinese Research Academy of Environmental Science, an entity independent from the Inner Mongolia Communications Department (IMCD) in terms of financial and personnel management, carried out the environmental impact assessment (EIA).

2. The EIA and environmental action plan (EAP) cover the project's physical components: (1) 177 km of Class I highway from Hailar to Manzhouli (HRH) to the border with Russia, 106.5 km of which will be upgraded, with the rest newly constructed; (2) construction of an 8-ha cargo transfer terminal (CTT) in Hailar City; and (3) Border Roads for Trade, the improvement of five road sections, 430 km in total.

3. The proposed HMH alignment has the following environmentally sensitive spots: (1) four residential areas, (2) one hospital with 260 beds, (3) three seasonal rivers, and (4) the Erka Wetland.

4. The CTT will be a truck terminal where imported goods are re-loaded from Russian trucks to Chinese trucks. The CTT will be located in an industrial area, Haidong Industrial Development Zone, which has no environmentally sensitive spots. Wastewater treatment facilities, including a shutdown system for accidents, will be installed. The highway between Hailar and the CTT is under construction. The EIA of the highway was submitted to the Bank in June 2004 for its approval.

5. The EIA and EAP for the BRFT were drafted by the Inner Mongolia Environmental Science Institute, discussed with the public, and submitted to the Bank for review and approval. The EIA found that one road section will cross a local nature reserve, and after discussion with the Bank, IMCD changed the design to avoid this crossing. The EIA identified residential areas and a hospital as environmentally sensitive spots, and the EAP describes mitigation measures.

Ecological Environment

6. The EIA reports identified no protected areas in the impact zone of the project, which was confirmed by *Directory of Wetlands* by IUCN and *Biodiversity Review of China* by WWF. The project area lies mainly in grassland with herding and agricultural activities except for a 13 km section through Erka Wetland.

7. Hulunbeier Region is home to several protected wetlands. Erka Wetland, however, although a natural habitat, is not a protected area. To evaluate the quality and importance of the Erka Wetland, two local ecological experts, from the College of Ecology and Environment of the Inner Mongolia University of Agriculture and the Inner Mongolia Academy of Environmental Sciences conducted ecological surveys. Both experts agreed that Erka Wetland is an ordinary wetland and appropriate mitigation measures will limit impacts of the project to an acceptable level.

8. The safeguard meeting requested confirmation of the two national experts' conclusion, and the task team hired Dr. Martin Williams, an independent ecological expert based in Hong Kong, to review the ecological impacts of the HRH component, in particular on the Erka Wetland. The mission examined the wetland and reviewed the draft EIA May 17–20, 2004. The summary of his report was incorporated into the EIA. Dr. Williams found that although the Erka Wetland is not a protected area, it has international importance in terms of migration of birds and should be protected as much as possible. He also found that the project will have major impacts during the construction period, but only minimal impacts during operations, and he recommended mitigation measures for protecting the wetland, which are included in the EAP and summarized in the following paragraphs.

9. *Wetland protection.* The Manzhouli government, before the highway opens, will draw up a wetland protection plan introducing land use planning (i.e., zoning), to ensure that no highway-related developments damage the wetland, especially on lands that rarely or never flood. Important small lakes and ponds near the Erka Wetland will be included in the wetland protection plan. The Manzhouli government environment department will examine all developments arising from highway operation for adverse impacts on the wetland and will impose mitigation measures if necessary. The Manzhouli government environment department also will patrol the wetland to ensure no hunting takes place during either construction or operation. The HMPMO will implement similar mitigation measures at the other wetland areas during construction work. Vehicle speeds will be set low in the wetland area.

10. *Wetland observation facility.* To provide an opportunity for people to observe and learn about the ecology of the wetland, a wetland observation facility will be built by IMCD with the involvement of the environmental department of the Manzhouli government. The facility will include artificial bird nest sites, such as floating or elevated platforms, parking for about 10 vehicles, narrow wooden paths over the wetland, and educational information on signing boards.

11. *Special ecological monitoring.* The EAP calls for special ecological monitoring for the Erka Wetland for three years during construction and three years during operation. Monitoring will determine if birds are killed by vehicles traveling the highway across Erka or by the introduction of new power or telephone lines beside the highway. If so, mitigation measures will be taken.

Other environmental issues

12. *Noise and air quality.* The noise level is generally low along the proposed alignment. In residential areas the Class 4 noise standard is satisfied. However, at the Mineral Hospital along the existing highway, Class 4 standard is satisfied but Class 1 standard is not because of existing traffic. According to the EIA, the future noise level will be reduced by 5 dB in 2015 because (1) the proposed alignment will divert a major part of the traffic from the existing highway to the new highway and (2) six lines of trees will be planted along the new alignment, which is 140 m from the hospital. Air quality meets standards.

13. *Water quality.* The water quality along the route is fairly good, meeting the water quality standards of Class III claimed by the Inner Mongolia Environmental Protection Bureau.

14. *Cultural relics.* Hulunbeier Archeological Authority determined that there are no cultural relics along the project alignment.

Potential environmental impacts and their mitigation measures

Design Phase

15. *Alternatives analysis.* Six alternatives, including the non-project alternative, were studied. The design includes the following major considerations: (i) avoid under-planning of tourism areas; (ii) use the existing alignment as much as possible; (iii) avoid fragile ground in an old mining area; (iv) avoid passing through Manzhouli City; and (v) minimize the road length crossing Ekra Wetland.

16. *Erka Wetland.* The design of the highway will make the wetland section as short as possible and the bridge structure as long as possible in order not to interfere with water flow. In total, 1,640 m or 12.4 percent of the section will be bridge; in addition 10 culverts will be constructed. Temporary land will be minimized in the wetland. No dumping sites will be set in the wetland.

17. *Social Disruption.* To prevent social disruption by the Class I highway, following recommendations from public consultations, the number of culverts increased from 104 in the original design to 110, and pathways and pedestrian overpasses from 30 to 47.

Construction Phase

18. *Noise.* Heavy machinery operation and other construction activities will have adverse impacts on the acoustic environment in the populated project areas. Strict regulations on the schedule of construction works will be implemented to minimize these impacts. Heavy machinery operation will be prohibited between 10:00 p.m. and 6:00 a.m.

19. *Air pollution.* Dust during construction work was identified as a major environmental impact at this stage of the project. Asphalt mixing plants will be located at least 300 m from residential areas on the leeward. Material sites and mixing sites will be at least 100 m away from residents. Construction sites and mixing sites will be sprayed with water regularly.

20. *Water pollution.* Wastewater from construction sites and camps will not be discharged into water bodies, but will be treated and applied to land. Domestic solid waste from construction sites and camps will be collected regularly and disposed of in an appropriate manner. During bridge construction, cofferdam and sedimentation ponds will be made to prevent water turbidity.

21. *Vegetation.* Most parts of the existing highway have already obtained enough right-of-way for a Class I highway. No trees will be cut because the area is grassland. Rehabilitation of vegetation will be conducted after the construction work.

22. *Erka Wetland.* No wastes or wastewater will be allowed to be dumped into the wetland. Temporary land use will be minimized in the wetland area. Hunting will be strictly prohibited. Special monitoring of the ecological condition of Erka Wetland will be conducted by ecological experts during construction.

23. *Cultural relics.* Although not expected, if cultural relics are found during construction, excavation will be stopped immediately, and the local cultural authority will be informed of the discovery. Construction will not resume until the cultural relics have been identified by the authorized institution and preservation measures taken.

Operation Phase

24. *Erka Wetland.* The speed limit will be reduced and no phone poles will be set in the wetland section. The local government will establish a wetland protection plan; and land use around the wetland will be controlled. Ecotourism will be promoted with carefully designed facilities for observation to enhance public understanding of the importance of wetland protection. Special monitoring on the ecological condition of Erka Wetland will be conducted for three years during the operation period.

25. *Water pollution.* Wastewater from service centers or toll stations will be processed to achieve the second-level farmland Irrigation Water Quality Standards and the water will be applied to the land.

26. *Vegetation and soil erosion.* Land used temporarily will be cleaned up after construction. Grass seed will be sown at temporarily used land and at borrow pits. The sites will be covered with straw to facilitate vegetation recovery.

Environmental monitoring

27. During the construction and operation phases, environmental monitoring will be carried out to verify the project's actual impacts on the environment, identify unexpected environmental problems at an early stage, and adjust environmental measures as appropriate. Environmental monitoring will be conducted by the Environmental Protection Office of IMCD during construction. In the operational stage, monitoring will be entrusted to local environmental monitoring centers. The results of monitoring will be reported quarterly to the Bank and local environmental authorities. Special ecological monitoring will be conducted during construction and the first three years of operation to observe the impacts of the project on the wetland and additional mitigation measures will be taken if necessary. The national independent experts who helped prepare the EIA will be asked to take part in the monitoring.

Institutional arrangements and training

28. IMCD will set up a chief supervision office and two station offices at Hailar and Manzhouli. It will assign two supervision engineers to be responsible for environmental protection. To enhance environmental protection knowledge and skills, key environmental protection staff will receive intensive training, including lectures by experts, site visits to similar projects, and periodic national or international training. A training budget of US$62,000 has been allocated.

Public consultation and information disclosure

29. A two-stage public consultation was carried out according to World Bank guidelines: shortly after environmental screening and before the terms of reference for the EA were finalized (September 2003); and after the draft environmental assessment report was prepared (November 2003). Meetings were held with local people at project-affected towns and surveys were carried out through questionnaires. Project-affected individuals, organizations of concerned villagers, and village committees were intensively consulted.

30. Apart from resettlement-related issues, the public voiced concerns about social disruption by the expressway and environmental protection during construction. Their feedback is reflected in the engineering designs and the EAP: more culverts, pathways, and pedestrian overpasses; the budget allocated for rehabilitation of vegetation; a dumping site relocated to preserve the scenic view.

31. During the national approval procedure, SEPA requested IMCD to conduct a first-class ecological assessment according to SEPA standards because 13 km of the proposed highway crosses a wetland. The revised draft EIA was submitted to SEPA in March 2004 and was approved in July 2004.

32. The EIA and EAP were disclosed locally at the project office in Hulunbeier and the government offices in Hailar and Mazhouli, as well as in Washington, D.C., in July 2004. The final EIA and EAP were submitted to the Bank in July 2004.

SOCIAL ASPECTS OF PROJECT PREPARATION

Social assessment

33. The social assessment was designed to i) map out the general socioeconomic situation in project areas; ii) facilitate consultation and assist in the resettlement planning process; iii) identify ethnic minority groups, facilitate consultation with them, assess related project impacts and recommend necessary mitigation measures; and iv) identify stakeholders and conduct a stakeholder analysis. The social assessment was conducted through desk analysis of historical data, government statistics, and academic research; and in sample field surveys through interviews, group discussions, and questionnaire surveys. The sample was chosen to be representative in terms of gender, ethnicity, occupation, age, economic status, and impact; and analysis and documentation of the findings.

34. Hulunbeier Municipality is rich in natural resources, particularly coal, oil, and iron, with large and well-known grazing areas. There are many ethnic minority groups in Hulunbeier, accounting for 18 percent of the population. Primary stakeholders include: i) people involved in border trade, ii) urban populations along the highway and roads, iii) farmers and herdsmen along the highway and roads, iv) people engaged in transportation.

35. The social assessment included a survey of stakeholders directly involved in border trade. The type and nature of facilities and services designed for the CTT reflected the requirements and preferences of potential users based on a survey conducted by the Sociology Department of Hohai University in March 2004. The population of the survey included importers/exporters, forwarding agents, trucking companies, truck drivers and cargo agents in Hailar and Manzhouli. Questions asked in the survey included the type and nature of facilities and services to be provided, ownership and management modalities (public vs. private sector), preferences for the type and capacity of equipment and, in the case of truck drivers, the

nature of amenities and conveniences. The survey established that there was an overwhelming support for the CTT with 96% of the potential users polled expressing interest to rent space at the CTT. Most were in favor of the CTT being developed and managed by a government agency. The greatest facility requirement was parking bays for trucks followed by conventional and temperature-controlled warehousing. Equipment with a higher capacity (over 10 tons) was preferred over those of lower capacity. More than 75% of truckers polled expressed the need for dining and washroom facilities, a workshop for minor repairs and overnight accommodation. About 25% of drivers surveyed were Russian truck drivers.

36. The following summarize the key analysis and findings of the CTT user survey:

- Currently there is no regular large cargo handling facility in Hailar City. Cargoes are either handled and stored with various small companies and /or government department storage
- facilities which are not open for public use. Some cargoes are handled in open space by the roads outside the city and some parking facilities are also assuming cargo transfer functions.
- There is an urgent need to establish a regular, modern and full-function cargo handling terminal both in view of the fast growing border trade and the rapid growth of local economy. Hailar City is by far a most appropriate location for such purpose.
- Facilities most needed include parking lots (99% of the respondents), large storage house (88%), temperature controlled storage facilities (77%), open storage lots (63%), loading docks and cargo handling equipments (51%).
- Majority polled expressed preference for hotel rooms, restaurants, public restrooms, gas stations and vehicle repairing services. As for customs and quarantine offices, 89% expressed preference for it, while 12% expressed otherwise.
- Regarding the terminal investment, 43% of respondents felt that it is a high risk venture, hence the government should be responsible for the terminal investment while 21% felt it should be left to the association of traders, and 10% felt it should be done totally by private sectors.
- As for the operation and management of the terminal, 30% felt that the terminal should be managed by the government, while 25% felt it should be done by the associations of traders, and 18% prefer to leave it to private sector.
- 96% of the interviewed expressed willingness to rent and use the terminal while 6% are not interested.

37. The Project will play an important role in the formation of the international border trade route in northeastern Asia, regional cooperation and development, resource development, and local economic development. Adverse impacts relate mainly to acquisition of grassland. This impact is considered small because of the small quantities of land lost and the large size of land holdings. Local concerns have been considered and are reflected in the engineering design. The consultation process indicates a high level of endorsement of the project among the primary stakeholders.

Land acquisition and resettlement planning

38. The project will require the acquisition of land. Five resettlement action plans (RAPs) have been developed in line with local laws and policies and World Bank OP 4.12. The planning activities included i) a detailed inventory of various categories of impacts and a census of affected people, tabulated by household and village; ii) a socioeconomic survey in the project areas to analyze the project impacts, understand the socioeconomic background in the project areas as the basis for resettlement planning and consult the affected people for their feedback to the resettlement planning; iii) a social assessment by the National Resettlement Research Center in the project areas; and iv) consultations with the local

population. Local governments, village leaders, and the affected population participated in the census and inventory, the finalization of the alignment, compensation rates, and the relocation and livelihood development schemes. Project information and resettlement policies were disseminated before and during the consultation process. The final draft RAPs have been placed in local libraries and their availability announced in local newspapers.

39. This project will affect 39 villages in 30 townships in 6 counties and banners. The RAPs contain descriptions of the policy framework, adverse impacts, and affected populations. The project will require 16,984 mu of land, including 546 mu of cultivated land, and 14,287 mu of grassland. The project will also require the demolition of 535 m2 of housing. Land loss will affect 2,129 people in 590 households and house demolition will affect 21 people in 4 households.

40. The RAPs document rehabilitation measures. The grassland acquired amounts to less than 1 percent in each village. Various options have been discussed with the affected people, including land redistribution and cash payments. At the request of the affected people, cash payment was selected for the resettlement program. The relocated families all plan to build replacement houses in the same villages.

41. The RAPs contain detailed resettlement budget and financing plan developed on the basis of the inventory and compensation rates. The total resettlement budget is estimated at RMB 24.46 million, (US$2.95 million). Resettlement will be financed entirely through government funds. The plans also describe in detail the resettlement implementation arrangements. The Inner Mongolia Autonomous Region has established a multi-level organizational framework to plan and implement resettlement. This framework has resettlement offices at the project level as well as prefecture/city, county/banner, and township levels. These offices have been staffed with experienced experts and their responsibilities have been specified in the RAPs.

42. The RAP contains detailed procedures and timeframe for grievance redress. The project office has designed a grievance redress mechanism. The project office has prepared a Resettlement Information Booklet describing this mechanism and has distributed it to all affected households.

43. The project office has designed internal and independent monitoring mechanisms for RAP implementation. Internal monitoring will be conducted through the resettlement offices at various levels of government. It will focus on physical progress of RAP implementation. Independent monitoring will be carried out by East China Science and Engineering University every six months. Apart from physical progress, it will evaluate livelihood restoration efforts and their effectiveness. The RAP describes in detail monitoring purpose, responsibility, indicators, methodology, procedures and reporting requirements.

Ethnic minority people's development plan (EMDP)

44. Hulunbeier Municipality is an ethnic minority area. IMCD engaged the Social Development Institute of Hehai University to conduct a social assessment in the project areas and develop an EMDP. The EMDP was developed on the basis of an analysis of local policies on ethnic minorities, a desk analysis of historical, academic research and statistic data, a sample questionnaire survey, interviews of key informants and focus groups discussions among different ethnic minority groups. The EMDP describes the ethnic minority groups identified in the project areas that will be affected, the legal framework regarding ethnic minority groups, social and economic life of the ethnic minority groups, project benefits as well as adverse impacts, information dissemination and consultation efforts, and proposed measures and implementation arrangements, including budget, institutions and monitoring arrangements.

45. Hulunbeier Municipality has 35 ethnic minority groups, with a population of 468,600, about 18 percent of the population. The larger groups include Mongolian, Manchurian, Dakar, Hui, Ewenki, Korean, and Elunchun. The consultant team collected feedback from the stakeholders and analyzed the project impacts on them. The project is expected to benefit all local population, including the ethnic minority groups. Project benefits are expected in i) improved transportation conditions, particularly

through the BRFT component, ii) improved employment opportunities under the project, iii) promotion of better use of natural resources and development of livestock industries.

46. The project is also expected to have direct adverse impacts on the ethnic minority groups, associated mainly with land acquisition and house demolition, inconvenience in road crossings and operation of hay-transporting vehicles. Project land acquisition will affect mainly Mongolian families, and the BRFT component will affect a small number of Daker and Elunchun families. Of the 590 affected families, 320 are ethnic minority families, including 23 Dakar and 5 Elunchun families. The families along the road are scattered and the average grassland holding is large, the land acquisition impact is small, and cash payment is considered a sufficient measure for rehabilitation purpose. This was also the popular request in the consultation process. These are fully reflected in the RAPs.

47. The consultation process and the questionnaire survey also elicited concerns from the ethnic minority groups along the proposed highway upgrading: One concerned access to grazing areas. This concern was shared with the project design engineers, who took different versions of the alignment design to local consultation sessions. As a result of these repeated consultations, the number of project passes has increased from 23 in the original design to 47 in the current design. The engineers promised to continue this consultation process to further optimize the project design. The second issue was the safe operation of hay-transporting vehicles with the upgraded highway during harvest season. Alternatives are being considered to address this issue, including a new alignment, a parallel special route for slow traffic, and special traffic control measures during hay harvesting season. Consultations are ongoing with local governments and the local population.

48. Project information was provided to the ethnic minority groups through broadcast, meetings and village public boards. Project authorities will continue the consultation process to ensure the participation of the Mongolian minority people in the decision-making process during project implementation.

49. The multilevel resettlement organization has been delegated responsibility for implementing the EMDP. EMDP-related costs are included in the RAPs and project engineering costs. IMCD and Hulunbeier government have established mechanisms for internal and independent monitoring of EMDP implementation. Hehai University has been engaged to conduct independent monitoring once a year until one year after project completion.

Annex 11: Project Preparation and Supervision

CHINA: Inner Mongolia Highway and Trade Corridor Project

	Planned	Actual
PCN review	12/17/2003	12/17/2003
Initial PID to PIC	12/24 /2003	12/24/2003
Initial ISDS to PIC	12/24/2003	12/24/2003
Appraisal	09/06/2004	09/25/2004
Negotiations	12/06/2004	
Board/RVP approval	01/18/2005	
Planned date of effectiveness	04/18/2005	
Planned date of mid-term review		
Planned closing date	06/30/2010	

KEY INSTITUTIONS RESPONSIBLE FOR PREPARATION OF THE PROJECT:

Inner Mongolia Communications Department, jointly with Hulunbeier prepared the project with an assistance by (i) China Highway Engineering Consulting Supervision General Company for the engineering feasibility study of HMH; (ii) Hulunbeier Highway Survey and Design Institute for the engineering feasibility study of BRFT, (iii) Beijing Environmental Science Academy for the environmental assessment of HMH and (iv) IMAR Environment and Science Institute for the environmental assessment of BRFT.

50. Bank staff and consultants who worked on the project included:

Name	Title	Unit
Supee Teravaninthorn	Task Team Leader/Sr. Economist	EACCF
Yasuhiro Kawabata	Sr. Highway Engineer	EASTR
Gao Boping	Transport Specialist	EACCF
Zhang Wenlai	Highway Engineer	EACCF
Naoya Tsukamoto	Sr. Environment Specialist	EASES
Chaohua Zhang	Sr. Social Sector Specialist	EASES
Han-Kang Yen	Research Analyst	EASTR
Dawei Yang	Procurement Specialist	EACCF
Hongkun Yang	Procurement Specialist	EACCF
Yi Geng	Financial Management Specialist	EAPCO
Karin Nordlander	Lead Counsel	LEGEA
Kek Choo Chung	Logistics Consultant	
Teresita Ortega	Program Assistant	EASTR
Jing Xu	Team Assistant	EACCF

Bank funds expended to date on project preparation:

Bank resources: US$224,031 (as of July 8, 2004)

Trust funds:

Total: US$224,031

Estimated Approval and Supervision costs:

Remaining costs to approval: US$200,000

Estimated annual supervision cost: US$90,000

Annex 12: Documents in the Project File

CHINA: Inner Mongolia Highway and Trade Corridor Project

General Documents

• Feasibility Study Report for Hailar-Manzhouli Highway	March 2003
• Revised Feasibility Report for HMH	December 2003
• Feasibility Report for Dayangshu–Baihuapai road improvement	December 2003
• Feasibility Report for Zhalainuoer–Heishantou road improvement	May 2004
• Feasibility Report for Yimin–Handagai road improvement	May 2004
• Feasibility Report for Alatanemole–Arihashate road improvement	December 2003
• Feasibility Report for Amugulang–Ebuduge road improvement	December 2003
• Implementation Organization Structure	July 2004
• Project Implementation Plan	July 2004

Safeguard Documents

Environment

• Environmental Impact Assessment (EIA) TOR for HMH	January 2003
• EIA Summary for Dayangshu–Baihuapai	May 2004
• EIA Summary for Zhalainuoer–Heishantou	May 2004
• EIA Summary for Yimin–Handagai	May 2004
• EIA Summary for Alatanemole–Arihashate	May 2004
• EIA Summary for Amugulang–Ebuduge	May 2004
• Additional report on the Erka Wetland	June 2004
• EIA Summary for HMH	July 2004
• EIA for HMH	June 2004
• Environmental Management Plan for HMH	April 2004

Social/Resettlement

• Resettlement Action Plan	February 2004
• Social Assessment of the HMH investment	February 2004
• Social Assessment of the investment for Cargo Transfer Terminal	June 2004

Other Documents

• Procurement Plan	June 2004
• Project Procurement Capacity Assessment	August 2004
• Project Financial Management Assessment	August 2004

Annex 13: Statement of Loans and Credits

CHINA: Inner Mongolia Highway and Trade Corridor Project

19-Jul-04

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements* Orig.	Frm Rev'd
P075602	2004	CN-2nd National Railways (Zhe-Gan Line)	200.00	0.00	0.00	0.00	200.00	0.00	0.00
P073002	2004	CN-Basic Education in Western Areas	100.00	0.00	0.00	0.00	99.34	-0.66	0.00
P065463	2004	CN - Jiangxi Integrated Agric. Modern.	100.00	0.00	0.00	0.00	99.00	3.49	0.00
P066955	2004	CN-ZHEJIANG URBAN ENVMT	133.00	0.00	0.00	0.00	133.00	0.00	0.00
P069852	2004	CN-Wuhan Urban Transport	200.00	0.00	0.00	0.00	200.00	106.60	0.00
P081749	2004	CN-Hubei Shiman Highway	200.00	0.00	0.00	0.00	200.00	0.00	0.00
P077615	2004	CN-GEF-Gansu & Xinjiang Pastoral Develop	0.00	0.00	10.50	0.00	10.50	1.20	0.00
P077137	2004	CN-4th Inland Waterways	91.00	0.00	0.00	0.00	91.00	0.00	0.00
P065035	2004	CN-Gansu & Xinjiang Pastoral Development	66.27	0.00	0.00	0.00	65.61	7.13	0.00
P075728	2004	CN-Guangdong/PRD UR ENVMT	128.00	0.00	0.00	0.00	128.00	0.00	0.00
P068058	2003	CN-Yixing Pumped Storage Project	145.00	0.00	0.00	0.00	133.05	-3.10	0.00
P040599	2003	CN-TIANJIN URB DEV II	150.00	0.00	0.00	0.00	143.82	4.22	0.00
P067337	2003	CN-2nd GEF Energy Conservation	0.00	0.00	26.00	0.00	14.60	18.90	0.00
P076714	2003	CN-2nd Anhui Hwy	250.00	0.00	0.00	0.00	247.50	20.50	0.00
P058847	2003	CN-3rd Xinjiang Hwy Project	150.00	0.00	0.00	0.00	99.33	14.33	0.00
P070191	2003	CN-SHANGHAI URB ENVMT APL1	200.00	0.00	0.00	0.00	190.00	10.00	0.00
P070441	2003	CN-Hubei Xiaogan Xiangfan Hwy	250.00	0.00	0.00	0.00	144.33	-15.67	0.00
P064729	2002	CN-SUSTAINABLE FORESTRY DEV. PROJECT	93.90	0.00	0.00	0.00	76.07	10.91	0.00
P058846	2002	CN-Natl Railway Project	160.00	0.00	0.00	0.00	31.60	6.60	0.00
P060029	2002	CN-Sustain. Forestry Dev(Natural Forest)	0.00	0.00	16.00	0.00	14.11	4.60	0.00
P071147	2002	CN-Tuberculosis Control Project	104.00	0.00	0.00	0.00	82.74	-21.26	0.00
P070459	2002	CN-Inner Mongolia Hwy Project	100.00	0.00	0.00	0.00	85.63	8.63	0.00
P068049	2002	CN-Hubei Hydropower Dev in Poor Areas	105.00	0.00	0.00	0.00	84.02	18.52	0.00
P045915	2001	CN-Urumqi Urban Transport	100.00	0.00	0.00	0.00	49.78	49.78	0.00
P047345	2001	CN-HUAI RIVER POLLUTION CONTROL	105.50	0.00	0.00	0.00	84.00	-21.50	0.00
P056596	2001	CN-Shijiazhuang Urban Transport	100.00	0.00	0.00	0.00	85.41	58.61	0.00
P056199	2001	CN-3rd Inland Waterways	100.00	0.00	0.00	0.00	74.99	8.49	0.00
P051859	2001	CN-LIAO RIVER BASIN	100.00	0.00	0.00	0.00	60.26	26.76	0.00
P058845	2001	Jiangxi II Hwy	200.00	0.00	0.00	54.77	63.13	8.90	0.00
P056516	2001	CN - WATER CONSERVATION	74.00	0.00	0.00	0.00	33.96	8.66	0.00
P058843	2000	Guangxi Highway	200.00	0.00	0.00	0.00	90.20	46.20	0.00
P049436	2000	CN-CHONGQING URBAN ENVMT	200.00	0.00	0.00	3.70	148.51	74.91	0.00
P056424	2000	CN-TONGBAI PUMPED STORA	320.00	0.00	0.00	100.00	146.04	113.24	0.00
P058844	2000	3rd Henan Prov Hwy	150.00	0.00	0.00	0.00	49.58	28.58	0.00
P042109	2000	CN-BEIJING ENVIRONMENT II	349.00	0.00	25.00	0.00	282.76	195.51	0.00
P045264	2000	CN-SMALLHLDR CATTLE DEV	93.50	0.00	0.00	0.00	10.32	5.62	0.00
P064924	2000	CH-GEF-BEIJING ENVMT II	0.00	0.00	25.00	0.00	23.32	20.51	5.51
P064730	2000	CN - Yangtze Dike Strengthening Project	210.00	0.00	0.00	0.00	105.73	105.73	0.00
P045910	2000	CN-HEBEI URBAN ENVIRONMENT	150.00	0.00	0.00	0.00	113.96	50.96	0.00
P041268	1999	CN-Nat Hwy4/Hubei-Hunan	350.00	0.00	0.00	0.00	50.33	40.33	0.00
P056216	1999	CN - LOESS PLATEAU II	100.00	50.00	0.00	0.00	16.79	18.92	-2.91
P038121	1999	CN-GEF-RENEWABLE ENERGY DEVELOPMENT	0.00	0.00	35.00	0.00	21.96	29.90	11.38
P060270	1999	CN-ENTERPRISE REFORM LN	0.00	5.00	0.00	0.00	2.25	3.75	3.53
P057352	1999	CN-RURAL WATER IV	16.00	30.00	0.00	0.00	19.57	16.16	11.34
P058308	1999	CN-PENSION REFORM PJT	0.00	5.00	0.00	0.00	1.17	1.17	0.00
P042299	1999	TEC COOP CREDIT IV	10.00	35.00	0.00	0.00	34.23	-12.39	0.00
P046829	1999	RENEWABLE ENERGY DEVELOPMENT	100.00	0.00	0.00	0.00	12.87	99.87	10.00

			Original Amount in US$ Millions					Difference between expected and actual disbursements*	
Project ID	FY	Purpose	IBRD	IDA	GEF	Cancel.	Undisb.	Orig.	Frm Rev'd
P046564	1999	CN - Gansu & Inner Mongolia Poverty Red.	60.00	100.00	0.00	13.30	33.46	29.39	-8.83
P046051	1999	CN-HIGHER EDUC. REFORM	20.00	50.00	0.00	0.00	5.69	7.31	0.00
P003653	1999	CN-Container Transport	71.00	0.00	0.00	18.61	3.01	21.62	0.70
P043933	1999	CN-SICHUAN URBAN ENVMT	150.00	2.00	0.00	0.00	84.94	82.56	26.76
P049665	1999	CN-ANNING VALLEY AG.DEV	90.00	30.00	0.00	0.00	17.31	12.48	0.00
P051856	1999	ACCOUNTING REFORM & DEVELOPMENT	27.40	5.60	0.00	0.00	17.60	17.51	0.00
P036953	1999	CN-HEALTH IX	10.00	50.00	0.00	0.00	33.31	23.58	-0.01
P051888	1999	CN - GUANZHONG IRRIGATION	80.00	20.00	0.00	0.00	23.25	19.84	0.00
P051705	1999	Fujian II Highway	200.00	0.00	0.00	0.00	51.00	51.00	0.00
P050036	1999	Anhui Provincial Hwy	200.00	0.00	0.00	9.60	32.99	42.59	0.00
P041890	1999	CN-Liaoning Urban Transport	150.00	0.00	0.00	0.00	26.78	26.78	0.00
P036414	1998	CN-GUANGXI URBAN ENVMT	72.00	20.00	0.00	10.19	58.34	66.26	31.27
P036949	1998	CN-Nat Hwy3-Hubei	250.00	0.00	0.00	0.00	21.15	21.15	0.00
P003539	1998	CN - SUSTAINABLE COASTAL RESOURCES DE	100.00	0.00	0.00	2.06	45.61	47.68	0.47
P003566	1998	CN-BASIC HEALTH (HLTH8)	0.00	85.00	0.00	0.00	35.87	24.51	0.00
P003606	1998	ENERGY CONSERVATION	63.00	0.00	22.00	0.00	31.67	18.37	0.00
P003614	1998	CN-Guangzhou City Transport	200.00	0.00	0.00	20.00	100.31	120.31	100.31
P003619	1998	CN-2nd Inland Waterways	123.00	0.00	0.00	37.00	15.35	52.35	1.49
P035698	1998	HUNAN POWER DEVELOP.	300.00	0.00	0.00	145.00	21.52	166.52	-12.39
P045788	1998	Tri-Provincial Hwy	230.00	0.00	0.00	0.00	15.58	15.58	0.00
P046563	1998	CN - TARIM BASIN II	90.00	60.00	0.00	2.67	7.14	10.44	0.00
P046952	1998	CN - FOREST. DEV. POOR AR	100.00	100.00	0.00	0.00	29.62	-69.61	17.19
P049700	1998	CN - IAIL-2	300.00	0.00	0.00	0.00	1.65	1.65	0.75
P051736	1998	E. CHINA/JIANGSU PWR	250.00	0.00	0.00	86.00	43.86	129.86	16.77
P037859	1998	CN-GEF Energy Conservation	0.00	0.00	22.00	0.00	0.71	22.06	0.00
P040185	1998	CN-SHANDONG ENVIRONMENT	95.00	0.00	0.00	1.40	20.07	21.47	10.27
P003590	1997	CN - QINBA MOUNTAINS POVERTY REDUCTIO	30.00	150.00	0.00	0.00	3.20	6.55	-1.41
P036405	1997	CN - WANJIAZHAI WATER TRA	400.00	0.00	0.00	75.00	13.07	88.07	0.00
P044485	1997	SHANGHAI WAIGAOQIAO	400.00	0.00	0.00	0.00	72.21	49.01	51.76
P003637	1997	CN-NAT'L RURAL WATER 3	0.00	70.00	0.00	0.00	0.56	3.77	3.35
P003650	1997	TUOKETUO POWER/INNER	400.00	0.00	0.00	102.50	29.55	132.05	29.55
P040513	1996	2nd Henan Prov Hwy	210.00	0.00	0.00	19.00	12.88	31.88	23.88
P003599	1996	CN-YUNNAN ENVMT	125.00	25.00	0.00	19.48	35.68	56.92	17.43
P003602	1996	CN-HUBEI URBAN ENVIRONMENT	125.00	25.00	0.00	47.32	17.07	66.43	4.10
P003594	1996	CN - GANSU HEXI CORRIDOR	60.00	90.00	0.00	0.00	71.13	60.31	0.00
P034618	1996	CN-LABOR MARKET DEV.	10.00	20.00	0.00	0.00	5.56	7.67	0.00
P003571	1995	CN-7th Railways	400.00	0.00	0.00	119.00	10.28	129.28	10.28
P003596	1995	CN-Yangtze Basin Water Resources Project	100.00	110.00	0.00	1.92	0.21	4.60	4.60
P003603	1995	CN-ENT HOUSING & SSR	275.00	75.00	0.00	57.46	37.16	92.53	7.19
P003639	1995	CN-SOUTHWEST POVERTY REDUCTION PROJE	47.50	200.00	0.00	0.01	1.21	25.36	25.36
P003540	1994	CN-LOESS PLATEAU	0.00	150.00	0.00	0.00	0.93	0.27	0.00
P003632	1993	CN-ENVIRONMENT TECH ASS	0.00	50.00	0.00	0.00	0.86	1.44	1.12
		Total:	11,768.07	1,612.60	181.50	945.98	5243.72	2,912.98	400.83

CHINA

STATEMENT OF IFCs

Held and Disbursed Portfolio (US$ million)

Mar-04

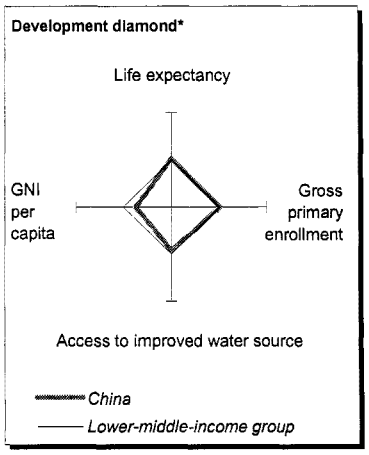
		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
2002	ASIMCO	0.00	10.00	0.00	0.00	0.00	10.00	0.00	0.00
2003	Anjia	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	BCIB	0.00	0.00	11.60	0.00	0.00	0.00	0.00	0.00
1999/00/02	Bank of Shanghai	0.00	24.67	0.00	0.00	0.00	24.67	0.00	0.00
2002	CDH China Fund	0.00	15.17	0.00	0.00	0.00	2.09	0.00	0.00
2003	CSMC	0.00	12.00	0.00	0.00	0.00	9.60	0.00	0.00
2004	CUNA Mutual	0.00	12.00	0.00	0.00	0.00	1.47	0.00	0.00
1998	Chengdu Huarong	6.28	3.20	0.00	7.04	6.28	3.20	0.00	7.04
1998	Chengxin-IBCA	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00
1992	China Bicycles	4.50	0.00	0.00	0.00	4.50	0.00	0.00	0.00
2004	China II	28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	China Re Life	0.00	15.41	0.00	0.00	0.00	15.29	0.00	0.00
1994	China Walden Mgt	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
1995	Dupont Suzhou	7.79	0.00	0.00	0.00	7.79	0.00	0.00	0.00
1994	Dynamic Fund	0.00	8.05	0.00	0.00	0.00	6.40	0.00	0.00
2003	Great Infotech	0.00	3.50	0.00	0.00	0.00	2.80	0.00	0.00
1999	Hansom	0.00	0.08	0.00	0.00	0.00	0.08	0.00	0.00
2002	Huarong AMC	9.00	3.00	0.00	0.00	9.00	0.49	0.00	0.00
2004	IB	0.00	52.18	0.00	0.00	0.00	0.19	0.00	0.00
2002	IEC	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	Leshan Scana	5.21	1.35	0.00	0.00	3.61	1.35	0.00	0.00
2001	Maanshan Carbon	9.00	2.00	0.00	0.00	9.00	2.00	0.00	0.00
2001	Minsheng Bank	0.00	23.50	0.00	0.00	0.00	23.50	0.00	0.00
2001	NCCB	0.00	26.58	0.00	0.00	0.00	26.46	0.00	0.00
1996	Nanjing Kumho	0.00	3.81	0.00	0.00	0.00	3.81	0.00	0.00
2001	New China Life	0.00	30.70	0.00	0.00	0.00	23.32	0.00	0.00
1995	Newbridge Inv.	0.00	1.95	0.00	0.00	0.00	1.95	0.00	0.00
1997	Orient Finance	6.67	0.00	0.00	8.33	6.67	0.00	0.00	8.33
2003	PSAM	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00
1997/00	PTP Holdings	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00
2001	Peak Pacific	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00
2003	SAIC	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	SBTS	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
2000	SSIF	0.00	4.50	0.00	0.00	0.00	1.02	0.00	0.00
1998	Shanghai Krupp	27.50	0.00	0.00	61.43	27.50	0.00	0.00	61.43
1999	Shanghai Midway	0.00	16.02	0.00	0.00	0.00	16.02	0.00	0.00
1993	Shanxi	15.36	0.00	0.00	0.00	12.81	0.00	0.00	0.00
2002	Shenzhen PCCP	3.76	0.00	0.00	0.00	3.76	0.00	0.00	0.00
2001	Sino Gold	0.00	4.00	0.00	0.00	0.00	4.00	0.00	0.00
1995	Sino-Forest	23.33	0.00	0.00	0.00	18.33	0.00	0.00	0.00
2000	Suzhou PVC	0.00	2.48	0.00	0.00	0.00	2.48	0.00	0.00
1996	Wanjie Hospital	13.64	0.00	0.00	0.00	13.64	0.00	0.00	0.00
2004	Weihai Weidongri	0.73	0.00	0.00	0.00	0.73	0.00	0.00	0.00
	Wumart	0.00	6.48	0.00	0.00	0.00	6.48	0.00	0.00
	Total Portfolio:	212.50	311.86	36.60	83.80	134.49	188.96	0.00	79.66

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2002	ASIMCO	0.00	5.00	0.00	0.00
2004	CCB-MS NPL	0.00	0.00	3.00	0.00
2003	Cellon	0.00	0.00	5.70	0.00
2004	Colony China	0.00	0.00	50.00	0.00
2002	Darong	10.00	0.00	1.50	8.00
2002	Huarong AMC	15.00	0.00	0.00	0.00
2002	IEC	0.00	5.00	0.00	0.00
2002	KHIT	0.00	0.00	3.00	0.00
2004	NCFL	0.00	0.00	17.88	0.00
2004	Nanjing Kumho Ex	34.00	0.00	6.00	0.00
2003	Peak Pacific 2	0.00	0.00	10.00	0.00
2004	SIBFI	0.26	0.00	0.00	0.00
2002	SML	1.00	0.00	0.00	0.00
2002	Sino Mining	5.00	0.00	0.00	5.00
2002	Zhong Chen	0.00	0.00	0.00	32.00
	Total pending commitment:	65.26	10.00	97.08	45.00

Annex 14: Country at a Glance

CHINA: Inner Mongolia Highway and Trade Corridor Project

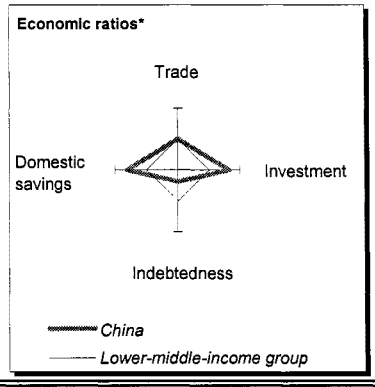
POVERTY and SOCIAL	China	East Asia & Pacific	Lower-middle-income
2003			
Population, mid-year *(millions)*	1,288.4	1,855	2,655
GNI per capita *(Atlas method, US$)*	1,100	1,080	1,480
GNI *(Atlas method, US$ billions)*	1,411.6	2,011	3,934
Average annual growth, 1997-03			
Population *(%)*	0.8	1.0	0.9
Labor force *(%)*	0.9	1.1	1.2
Most recent estimate (latest year available, 1997-03)			
Poverty *(% of population below national poverty line)*	5	..	..
Urban population *(% of total population)*	39	40	50
Life expectancy at birth *(years)*	71	69	69
Infant mortality *(per 1,000 live births)*	30	32	32
Child malnutrition *(% of children under 5)*	10	15	11
Access to an improved water source *(% of population)*	75	76	81
Illiteracy *(% of population age 15+)*	9	10	10
Gross primary enrollment *(% of school-age population)*	114	111	112
Male	114	112	113
Female	114	111	111



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

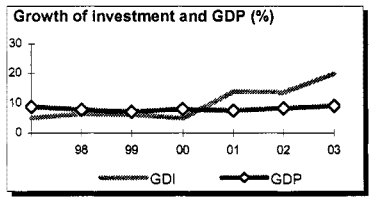
	1983	1993	2002	2003
GDP *(US$ billions)*	227.4	431.8	1,266.1	1,412.3
Gross domestic investment/GDP	33.8	43.3	40.4	44.4
Exports of goods and services/GDP	8.3	17.1	28.9	34.3
Gross domestic savings/GDP	34.5	41.8	43.4	47.0
Gross national savings/GDP	35.1	41.8	43.2	47.6
Current account balance/GDP	1.7	-2.1	2.8	3.2
Interest payments/GDP	0.2	0.6	0.3	0.3
Total debt/GDP	4.2	19.9	13.3	13.7
Total debt service/exports	10.1	9.4	7.9	7.2
Present value of debt/GDP	..	..	12.8	..
Present value of debt/exports	..	..	41.8	..

	1983-93	1993-03	2002	2003	2003-07
(average annual growth)					
GDP	9.5	8.6	8.3	9.1	7.7
GDP per capita	7.9	7.6	7.6	8.4	7.0

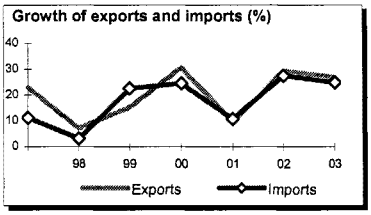


STRUCTURE of the ECONOMY

	1983	1993	2002	2003
(% of GDP)				
Agriculture	33.0	19.9	15.4	14.6
Industry	44.6	47.4	51.1	52.3
Manufacturing	36.5	34.5	35.4	39.3
Services	22.4	32.7	33.5	33.1
Private consumption	51.3	45.2	43.4	40.4
General government consumption	14.1	13.0	13.2	12.6
Imports of goods and services	7.5	18.6	25.9	31.8



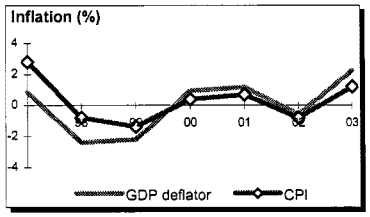
	1983-93	1993-03	2002	2003
(average annual growth)				
Agriculture	4.2	3.4	2.9	2.5
Industry	11.9	10.4	9.8	12.6
Manufacturing	11.5	10.3	10.0	17.0
Services	10.7	8.2	7.5	6.6
Private consumption	11.0	7.1	6.3	6.6
General government consumption	9.7	8.5	7.0	5.5
Gross domestic investment	9.2	9.3	13.7	19.8
Imports of goods and services	9.9	13.4	27.5	24.8



China

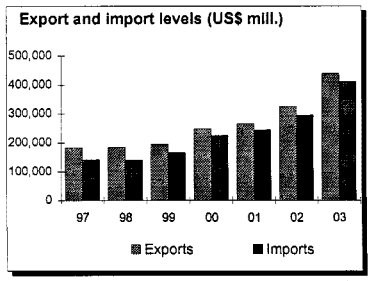
PRICES and GOVERNMENT FINANCE

	1983	1993	2002	2003
Domestic prices				
(% change)				
Consumer prices	4.5	14.7	-0.8	1.2
Implicit GDP deflator	1.1	14.6	-0.6	2.2
Government finance				
(% of GDP, includes current grants)				
Current revenue	23.0	13.7	18.3	18.7
Current budget balance	..	2.2	1.0	1.3
Overall surplus/deficit	-0.7	-0.7	-3.3	-2.5



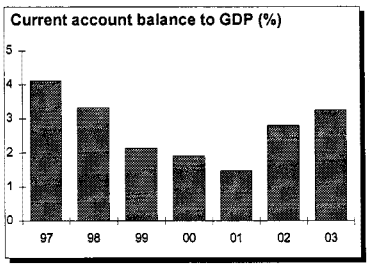
TRADE

	1983	1993	2002	2003
(US$ millions)				
Total exports (fob)	22,226	91,744	325,565	438,228
Food	2,853	8,399	14,623	17,533
Fuel	4,666	4,109	8,372	11,110
Manufactures	12,606	75,078	297,085	403,560
Total imports (cif)	21,390	103,959	295,203	412,760
Food	3,122	2,206	5,237	5,959
Fuel and energy	111	5,819	19,285	29,214
Capital goods	3,988	45,023	137,030	192,869
Export price index *(1995=100)*	41	81	78	82
Import price index *(1995=100)*	69	88	86	95
Terms of trade *(1995=100)*	60	93	90	86



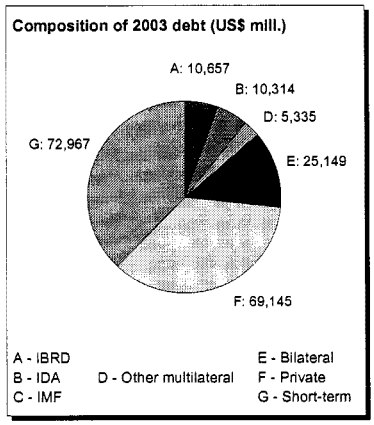
BALANCE of PAYMENTS

	1983	1993	2002	2003
(US$ millions)				
Exports of goods and services	24,804	102,643	365,395	485,003
Imports of goods and services	22,545	111,776	328,013	448,924
Resource balance	2,259	-9,133	37,383	36,079
Net income	1,158	-1,284	-14,945	-7,838
Net current transfers	511	1,172	12,984	17,634
Current account balance	3,928	-9,245	35,422	45,875
Financing items (net)	-1,233	11,012	40,085	71,148
Changes in net reserves	-2,695	-1,767	-75,507	-117,023
Memo:				
Reserves including gold *(US$ millions)*	..	27,336	297,735	416,208
Conversion rate *(DEC, local/US$)*	2.6	8.0	8.3	8.3



EXTERNAL DEBT and RESOURCE FLOWS

	1983	1993	2002	2003
(US$ millions)				
Total debt outstanding and disbursed	9,609	85,928	168,337	193,567
IBRD	4	4,549	11,254	10,657
IDA	67	5,160	9,423	10,314
Total debt service	2,691	10,166	30,596	37,064
IBRD	3	544	2,981	2,690
IDA	1	38	180	219
Composition of net resource flows				
Official grants	73	272	311	..
Official creditors	623	4,615	-1,206	-3,092
Private creditors	363	8,217	-4,550	-1,769
Foreign direct investment	916	27,515	53,074	55,507
Portfolio equity	0	3,818	..	..
World Bank program				
Commitments	438	2,315	1,058	1,250
Disbursements	71	1,845	2,020	1,616
Principal repayments	0	248	2,502	2,459
Net flows	71	1,597	-482	-843
Interest payments	3	333	660	450
Net transfers	68	1,264	-1,142	-1,293



MAP SECTION