Technical Assistance Consultant's Report

Project Number: TA-6058 (REG)
September 2006

INNER MONGOLIA AUTONOMOUS REGION: Trade Facilitation and Logistics Development Strategy

(Financed by Asian Development Bank)

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Asian Development Bank

ABBREVIATIONS/ACRONYMS

Automated System of Customs Declaration	ASYCUDA
Automated Warehouse System	AWS
Baotou Transportation International Container Terminal	BTICT
Build-Operate-Transfer	BOT
China Road and Transport Association	CRTA
Electronic Data Interchange	EDI
Enterprise Resource Planning	ERP
Enterprise & Technology Development Zone	ETDZ
Foreign Direct Investment	FDI
Forty Equivalent Unit	FEU
GAMA-Mongolia proprietary Customs information system	
Global Positioning System	GPS
Government of Mongolia	GOM
Harmonized Tariff System	HTS
Hohhot Railway Foreign Economic	HRFE
Information and Communication Technology	ICT
Inland Container Depot	ICD
Inner Mongolia Autonomous Region	IMAR
Intelligent Transport System	ITS
International Association of Refrigerated Warehouses	IARW
International Federation of Freight Forwarders Association	FIATA
International Road Union	IRU
Letter of Credit	LC
Less than Trailer or Container Load	LTL/LCL
Logistics Service Provider	LSP
National Development and Reform Commission	NDRC
People's Republic of China	PRC
Public Refrigerated Warehouses	PRW
Radio Frequency System, Radio Frequency	RFS, RF
Renminbi	RMB
Request for Proposals and Request for Quotations	RFP/RFQ
SAFE-PRC Foreign Exchange Administration	
Small and Medium Enterprise	SME
Transports Internationaux Routiers	TIR
Transportation Management Information System	TMIS
United Nations Commission for Trade & Development	UNCTAD
World Customs Organization	WCO
World Food Logistics Organization	WFLO

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Chapter I. Introduction

The analysis of Inner Mongolia's logistics industry reveals a strategic agenda for implementation in order to fully develop the mining, agriculture and animal product sectors of the economy. The integration of the logistics industry with the abundant human and natural resources of not only Inner Mongolia, but also Mongolia benefits long term bilateral and international economic growth for both countries. There are commonalities and complementarities in the grassland economies and cultures and in mining which provide ample opportunities for cooperation, collaboration and interdependence in cross-border trade.

The strategic agenda for the development of the regional and international logistics systems between Inner Mongolia Autonomous Region (IMAR) and the Government of Mongolia (GOM) are summarized as follows:

- *Legal Framework and Policy Related Actions:* Both countries signed a road transport agreement and a transit agreement to ease the flow of cross border transportation. The implementation of the road transport agreement is not practiced and requires review. In addition, review and amendment of signed border agreements are needed to permit permanent opening and third country freight status at busy border ports. It is important that Mongolia's accession to the Convention on the International Transport of Goods under Transports Internationaux Routiers (TIR) carnets is matched by the People's Republic of China's (PRC) TIR accession in the near future. The resolution and practice of these legal and policy issues is consistent with several key PRC agencies' jointly issued policy to promote the development of a national modern logistics system and by the Western Development Program of the 11th Five-Year Plan to positively push forward the bilateral cooperation at the border cities and towns.

- *Improving Transport Networks and Corridors:* Inadequate and unsustainable road transportation within IMAR and at the borders as well as lack of rail capacity and availability of rail cars is a major impediment to a reliable and efficient logistics industry. In the short term, lack of connecting paved roads at the borders and between major cities of economic activities makes truck transport very expensive. However, in the long term, constraints in railway capacities prevent the development of the growing mining and agriculture sectors in their bulk and container shipments within IMAR, across borders and to international markets across frontiers and overseas. Limited transport access hinders competition among operators and between modes and thereby raises costs and lowers logistics service offerings.

- *Expansion at Dry Ports and Inland Depots:* Maintaining, upgrading and expanding two key existing dry ports (Erlian, Ganqimaodao) and three inland depots (Baotou, Linhe, Jining) for the increasing demand on road and rail logistics services. Infrastructure shortcomings impede service providers' ability to add value which in the long term benefits transit, cross border and international trade.

- *Building Refrigerated Capacity:* Development of facilities, equipment and management knowledge for refrigerating, freezing and cooling of the growing demand of fresh food products (vegetables, fruits, meat, dairy) would improve regional trade. A comprehensive approach is needed to seamlessly move shipments from primary, secondary and tertiary industries or from the farms to processors by logistics and transport providers.

- *Promoting Intermodalism:* Cargo movements at the borders and in key inland transport centers need facilities and knowledge to enable road to rail connections. The lack of capacity to handle intermodal shipments increases costs, limits choices and lowers reliability to meet destinations on time.

- *Building Logistics and Transport Information Systems:* Development of modern transport and logistics information and communication technology (ICT) infrastructure with common platforms within IMAR and across the border would vastly cut costs by reducing empty loads by trucks and long lines by farmers to unload produce. Productivity improvements would benefit Customs and financial providers by increasing revenue, cross border efficiency and payments and reduce the incidence of lost or stolen goods.

- *Trade and Transport Facilitation:* Harmonizing documentation, information systems and inspections at the borders would benefit logistics providers, banks and shippers in lowering costs, delays, and misunderstandings based on valuations and classification. The development of the logistics industry in IMAR requires service offerings to not only producers with large shipment volumes, but also for the consumer market served by the small enterprises who require consolidation service in the less than trailer or container load (LTL/LCL)) market. Greater communication by local governments at the borders and not just at the central government levels would facilitate the needs of all cross border activities and problems.

- *Capacity-Building and Logistics Human Resources Development:* All segments of the logistics and transport industries need specialized and structured training to become competent in modern practices of Customs, freight forwarding and multimodal systems as well as create greater awareness of important international agreements such as TIR.

This report identifies the key issues confronting the development of the logistics industry in Inner Mongolia and makes recommendations for action in order to increase economic interdependence in the country and across frontiers. The structure of the report is as follows: Chapter II reviews: IMAR's economy and pillar sectors indicating greater demand on the logistics services and transport capacity (Part A); a description of the current situation and existing programs of the transport networks, logistics infrastructure and the trade regime (Part B). This section identifies constraints with possible infrastructure improvement projects. Part C explains the current legal regime and outstanding issues in the bilateral agreements as well as the path for China acceding to TIR for the benefit of bilateral and transit trade facilitation; Part D summarizes globalization and the importance of logistics to economic development. Part E summarizes the agendas of key stakeholders and logistics companies with analysis on developing the industry. Chapter III concludes with a full text of the recommendations for IMAR and suggested action plans by IMAR and the Asian Development Bank (ADB) in order to implement the strategic agenda for logistics industry development.

Chapter II. Background and Issues

A. Economic and Trade Profile

Inner Mongolia Autonomous Region has a population of 23.9 million and an area of 1,183,000 square kilometers or one eighth of the entire territory of the country. The province is landlocked and borders Mongolia and Russia to the northern region by a 4,221 kilometer boundary line and eight provinces to the east, south and west.

The territory is characterized by mountainous areas with natural and mineral resources and grassland areas for agriculture, livestock and animal husbandry sectors. There is great potential for development and processing of the mining materials of coal for energy by one billion tons; rare earth and nonferrous metals of 827 million tons such as copper, lead, zinc, tin and germanium to name a few. In addition, there are known reserves of 3-4 billion tons of oil and 640.4 billion cubic meters of natural gas. Agriculture and livestock yields are of vegetables, fruit, meat, and dairy products. The most productive sector of the economy is animal husbandry for the material and the processing of cashmere and wool into textiles and garments.

The development of the logistics industry can increase the output potential in each of these sectors. At present, the low quality roads and poor capacity of rail networks and railcars hinders the development of the mining sector. The lack of modern logistics functions of information systems and refrigerated, or cold chain facilities constrains the agriculture and livestock sectors along with their downstream industries. Furthermore, these logistics and transport problems prevent outward oriented trade thereby reducing the prospects for foreign direct investment (FDI).

Table 1: Overview of Economy

	2000	2001	2002	2003	2004
GDP (USD billion)	16.94	18.69	20.97	26.00	32.79
Per Capital GDP (USD)	710.0	781.5	874.6	1085.2	1367.0
Primary Sector (% of GDP)	25.0	23.2	21.6	19.5	18.7
Secondary Sector (% of GDP)	39.7	40.5	42.0	45.3	49.1
Tertiary Sector (% of GDP)	35.3	36.3	36.4	35.2	32.2

(Source: Inner Mongolia Yearbooks 2001 to 2005)

Notes: Data in value terms in the table are calculated by RMB at current prices.
Exchange rate used: USD 1=RMB8.27 Yuan

From 2000-2004, Inner Mongolia's economy grew at an annualized average growth rate of 17.95%. The gross domestic product (GDP) increased from US $16.94 billion in 2000 to US $32.79 billion in 2004. Similarly, per capita GDP increased by an annualized average rate of 17.8% over the same period. In 2000, per capita GDP was US $710 and in 2004 US $1, 367. The goal of the IMAR government's Trade and Business Department is an annual increasing rate of 13% in the 11th Five-Year Plan. The challenge to Inner Mongolia is to improve the transport and logistics infrastructure in the face of growing real and potential demand.

In 2004, the primary sector declined as a percentage of GDP from 25% in 2000 to 18.7%. This indicates a ten year pattern of decline that could be offset by adequate transport and logistics facilitation for the mining and agriculture sectors. The secondary sector comprised almost half of the GDP total in 2004 based on the strength of the coal processing, power generating, chemical industries and the textile materials and garment businesses. The main export products of Inner Mongolia are the textile materials and garments.

The pillar industries of the province are textile materials and products; base metals and related materials; coal; chemicals; agriculture (dairy, meat) and vegetables (potatoes, tomatoes), fruits and cereals. The main regions of economic activity by sector are iron and steel in the west, farming in the south, animal husbandry in the north and mineral deposits everywhere. The key industrial cities for transport and logistics development are located in Hohhot, Baotou, Jining, Wuhai, Chifeng, Tongliao and Manzhouli. In 2006, the Trade and Business Department of IMAR stressed the importance of developing road infrastructure and the following industries: agriculture and animal husbandry; preservation techniques (cold chain) for vegetables, fruits, meat and dairy; textiles, chemicals and tertiary industries (services of logistics, information, development zones and tourism).

Table 2: Overview of International Trade

	2000	2001	2002	2003	2004
Exports (USD billion)	1.022	1.141	1.371	1.441	1.682
Imports (USD billion)	1.014	1.408	1.634	1.673	2.367
Top export partners	--Japan --Russia --Mongolia --Hong Kong --United States --Italy --France	-- Russia -- South Korea -- Japan --Mongolia --Hong Kong --United States --Italy	--Japan --South Korea -- Mongolia -- Russia --Hong Kong --United States --Italy	--Japan --South Korea -- Russia --Hong Kong --United States --Italy --Mongolia	--Japan --South Korea -- Hong Kong -- United States --Italy --Mongolia --Russia
Key export products/values (USD million)	--Foods (270.7) --Textile and silk Fabrics (200.6) --Garments (122.54) --Minerals (88.88) --Coals (60.68) --Chemicals and related products (30.4) --Others (178.9)	----Textile and silk Fabrics (230.6) --Minerals (153.7) --Coals (134.6) --Foods (124.6) --Garments (117.5) -- Chemicals and related products (37.4) --Others (265.4)	--Foods (244.8) --Minerals (200.3) --Coals (181.0) --Textile and silk Fabrics (156.7) --Garments (147.5) --Chemicals and related products (59.4) --Animal products (39.8) --Others (236)	--Textile materials and products (443.2) --Coal (285.2) --Vegetables, fruits and cereals (255.2) --Base metals and related materials (150.6) --Chemicals and related products (121.3)	--Textile materials and products (519.5) --Base metals and related materials (344) --Coal (325.1) --Chemicals and related products (133.96) --Vegetables, fruits and cereals (95.9)

(Source: Inner Mongolia Yearbooks 2001 to 2005)

Inner Mongolia's international trade structure shows increases in each year between 2000 and 2004. Exports by value increased by 17.26% on average between 2000 and 2004 to reach US $1,682 billion in 2004. However, exports are concentrated in textile and garment products as indicated in 2004 by a total of US $519.4 million or 30.8% of total exports. Imports increased by 23.6% over the same period to US $2,367 billion in 2004 for an imbalance of trade by 58% of the total.

The province's international trade flows have not increased much despite the tripling of the size of the economy from US $11.83 billion in 1996 to US $32.79 billion in 2004. The outward oriented trade flows are demonstrated by the openness ratio (defined as the sum of exports and imports to GDP) for IMAR which were 12% in 2004 as compared to 10.5% in 1996. In 2004, the main export destinations were Japan, South Korea, Hong Kong, United States, Italy, Russia and Mongolia.

Table 3: Key Export Products from Inner Mongolia (USD million)

Products	2000	2001	2002	2003	2004
Textile materials and products, garments	323.10	348.06	304.14	443.22	519.49
Coals	60.68	134.57	181.02	285.16	325.10
Minerals	88.88	153.72	200.25	6.35*	8.63*
Chemicals and related products	30.37	37.35	59.40	121.31	133.96
Foods and vegetable, fruits	270.73	124.63	244.83	255.23	95.91
Animal products	11.93	17.13	39.85	20.34	34.99

(Source: Inner Mongolia Yearbooks 2001 to 2005)
Note: according to the statistics the minerals exports declined very quickly since 2003.

There are annual increases in trade between China-Mongolia and IMAR-Mongolia as well. From 2003-2005, China-Mongolia trade flows increased year over year by 21%, 57.7% and 23.8%, respectively for a total import-export value of US $859,910,000 in 2005 from US $439,870,000 in 2003, a 39.8% annualized increase.

Table 4: China-Mongolia Trade

Year	**I/E Value (US$)**	**Percent Increase**
2003	439,870,000	21
Export	155,930,000	11.4
Import	283,940,000	27.1
2004	693,740,000	57.7
Export	233,350,000	49.7
Import	460,390,000	62.1
2005	859,910,000	23.8
Export	318,980,000	36.7
Import	540,930,000	17.3

(Source: IMAR, Department of Commerce)

The main exports were: potatoes, fruit, fluor, sugar, noodles, biscuits, plastics, carpets, glass, steel, trucks, trailers and electronics.

The main imports were: copper, ore, coke, horsehides, sheephides, cashmere, used steel and used aluminum.

Similarly, IMAR-Mongolia trade increased year over year by 6.5%, 38% and 19.38% over the 2003-2005 period. However, there is an imbalance of imports over exports accounting for by the large share of transit trade from Russia and Siberia of oil and timber.

Table 5: IMAR-Mongolia Trade

Year	I/E Value (US$)	Percent Increase
2003	222,650,000	6.53
Export	50,160,000	10.63
Import	172,490,000	5.39
2004	307,190,000	37.97
Export	84,640,000	68.73
Import	222,550,000	29.02
2005	363,620,000	19.38
Export	93,930,000	10.97
Import	272,790,000	22.58

(Source: IMAR, Department of Commerce)

Industry

Inner Mongolia is a large inland province in China with vast natural resources in rare earth minerals and coal. The province also depends on the grassland economies of animal husbandry and processed products from livestock as well as the bountiful agriculture harvests of grain, fruits and vegetables. The main industries are focused on the following:

Mining

The mineral industry is a traditional industry sector for IMAR with the largest reserves of iron ore, chromium, copper, lead, gold, mica salt and mirabilis in China. Inner Mongolia's rare earth metals account for over 60 percent of the world total and account for 90 percent of China's known deposits of rare earth metals. In the past, minerals were one of the major export products, but since 2003, export volumes of minerals decreased very quickly as domestic demand increased more rapidly. In 2004 the exports amounted to only US $8.63 million compared with exports of US $200.3 million in 2002. Baotou is one of the biggest steel cities in China and manufactures trucks, engineering machines and equipment. There are also many smelting factories in IMAR for processing the raw materials into more value added products such as zinc ingots.

Coal-mining is a very important sector in IMAR. There are increasing demands on the coal industry to extract, transport and process coal into coke. Erdos and Wuhai are the main coal mining and processing bases. The export value of coal products increased very quickly from US $60.7 million in 2000 to US $325.1 million in 2004 for an annualized average increase of 52.1 percent. In addition, coal is processed for the newly constructed power generation plants to meet the energy needs of the province and of neighboring provinces as the economy develops. New coal processing technologies are coming on stream over the next few years to produce liquid fuels and base chemicals.

Agriculture

Agriculture products of grain, cereal, vegetables and fruits are plentiful and of good quality for domestic and export markets. There are vegetables such as tomatoes and potatoes harvested by IMAR contracted farmers for tomato juice and potato chip plants in IMAR and to Beijing and Shanghai. In addition, the processed tomatoes and raw potatoes are exported to Mongolia, Russia and the United States customers.

Processed animal products are also a traditional sector in IMAR from the livestock and grassland resources. Two main animal products are mutton meat from lambs and cow's milk which have a broad market in the northern China area. The two top dairy production groups Mengniu and Yili have production bases throughout IMAR. Some animal products are exported to Mongolia, Russia and Japan, but these and other export markets are not well developed. Vegetables, fruits and the meat and dairy product sectors are hindered in part, by the lack of modern refrigerated logistics systems for both domestic and export markets

Inner Mongolia Autonomous Region's goat livestock are important for the raw cashmere and the processing of the luxury fiber into high quality garments. In the past, most raw materials were exported to other provinces and overseas, however, the industry improved with new processing technologies. Now, cashmere, textile materials and garments are top export products in IMAR by value to account for over 30 percent of total export value and contribute significantly to the local economy as well as to employment. At present, China is the largest supplier of cashmere in the world.

B. Transport and Logistics Infrastructure

Rail

Inner Mongolia's railway system transports bulk and containerized cargo in all directions for both domestic and international shipments. There are 7, 436 kilometers of track. The following are the main trunk lines:

Beijing-BaotouBeijing-Erenhot

Baotou-Lanzhou *Ulan Batar-Moscow*

Beijing-Tongliao *Beijing-Manzhouli-Moscow*

Hohhot-Tongliao *Inner Mongolia-Europe Railway*

Demand is increasing on the railways from the metal and chemical industries of IMAR as well as from the transit traffic from Russia of oil and timber through Mongolia at Erenhot to meet China's needs in developing the economy. The system is over stressed and poses difficulties for shippers of production raw materials and for consumer products which rely on rail to reach long distance destinations within and outside the country. The capacity problems of both the lack of railways and of shortage of railcars constrains shippers for opening new markets overseas via Qinhuangdao for bulk and Tianjin for all kinds of cargo. Moreover, logistics providers are not able to offer services to develop the logistics industry in IMAR to modern standards.

In many instances, shippers prefer railways over highways for reasons of cost, especially for bulk commodities. The average cost of rail transport is fixed at .015-.018 US cents per ton-kilometer whereas highway transport is dictated by the product and market conditions at .015-.018 US Dollars per ton-kilometer. However, the lack of capacity and time delays impede the decision to ship by rail.

A Bayonnaoer, Inner Mongolia beer producer's annual capacity is 100,000 tons per year with a plan of 200,000 tons by 2010. There are claims of waiting one week for a railcar as opposed to one day for a truck. Delivery time is important to beer because of the potential spoilage of the product. On-time delivery would be a problem, if a rail shipment arrived in 2-4 weeks at Guangzhou station without refrigeration of the rail cars. The company would use rail for lower cost reasons and a more reliable transit time.

Table 6: Freight Traffic (in 10,000) tonnes)

Mode	2000	2001	2002	2003	2004
Railway	9648	9816	10639	11513	17725
Highway	34979	36145	37239	38532	42697
Civil Aviation	2.00	0.90	1.00	1.10	1.60

(Source: Inner Mongolia Yearbooks 2001 2005)

Logistics industry development will be greatly enhanced in two trade corridors between IMAR and Mongolia. The first is the completion of the double tracks between Erlian and Jining by 2008. The second is the Ceke- Linhe-Hami, Xinjiang route of 755 kilometers for US $506,329,113 to serve the copper and zinc factories in IMAR. There is a plan for a Ganqimaodao-Jinquan Industrial Park route of 357 kilometers for US $506,329,113 for copper and coal shipments from Oyu Tolgoi and Tavin Tolgoi in South Gobi, Mongolia by 2008-09. The plan depends on the volume of commodities once a contract is signed between GOM and the PRC.

In addition, there is a new Asia-Europe Land Bridge railway of 9,814 km. from Hohhot to Frankfurt, Germany. It is a cooperative venture between Inner Mongolia Hohhot Railway Foreign Economic and Technological Group Co. LTD and Mongolia's Tuushin, freight forwarding company among 30 stations and 7 countries. One special train has 100 railcars or fifty 40 foot containers for mining and electronic products. The train travels from origin to destination in 14 days. This service can link Jining, Hohhot and Baotou by rail transport to various markets.

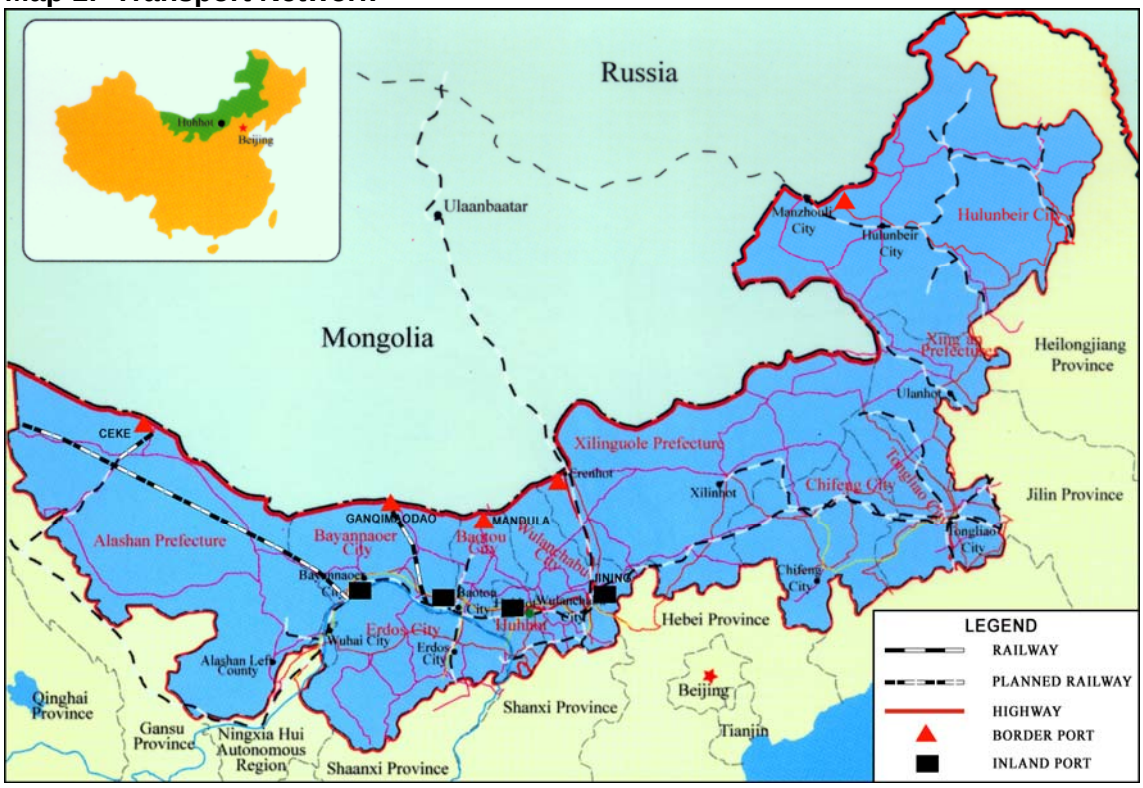
However, there are cost and service problems to overcome before the new Asia-Europe railway landbridge reaches full potential as a logistics gateway:

- The railway landbridge costs are higher than the sea route via Tianjin to Europe by US $1,000/twenty equivalent unit (TEU) container, but the inland trucking transport costs from Hohhot to Tianjin and from Poland to Germany make the sea route more expensive. Economies of scale by increasing volumes to lower per unit costs will make the new railway more attractive to shippers seeking international markets.

- Delays caused at the China-Mongolia border crossing from the railcars' change of axles or the transshipment of containers from one car to another, since China Railways operates on the standard guage of 1,435 mm. and Mongolia and Russia on the 1,524 mm guage.

- Quarantine and Customs differences across national boundaries
- Shortages of containers

Map 1: Transport Network



(*Source: Trade and Business Department, IMAR,2006)*

Road

Highways and roads are the main mode of freight transport in Inner Mongolia in terms of tons by 70% over rail with an annualized average increase from 2000-2004 of 5.11%. At present, there are 75,000 kilometers of roads in operation which carried 427 million tons of freight in 2004. IMAR has international, national and provincial highways that connect east and west, south and north. Some of the main routes are in Table 7.

Table 7: Current Main Highway Routes in IMAR

Highway	Origin-Destination	Description
A. National Highway		
1*. GZ025	Beijing-Jining-Hohhot-Baotou- Linhe- Yinchuan-Xining-Lahsa)	Most important eastward to Westward highway in IMAR, Expressway
2**. GD110	Beijing-Jining-Hohhot-Baotou- Linhe- Yinchuan-Lanzhou)	Parallel with GZ025, grade 2 highway, and some section may be grade 1.

3. GD208 Asia Highway AH3	Erlianhot-Jining-Datong to southward and entering Shanxi province	The main highway north-southward connecting Erlianhot to inland and it crosses GZ025 and GD110 at Jining. The section from Erlianhot to Saihantala (about 120kms) is under renovation.
4. GD209	Hohhot-Qingshuihe-Pianguan to southward and entering Shanxi province	The highway north-southward connecting Hohhot to inland southern region
5. GD210	Baotou-Erdos-Yulin to southward and entering Shaanxi province	The highway north-southward connecting Baotou to inland southern region, expressway
6. GD109	Beijing-Datong-Qingshuihe-Erdos-Wuhai-Yinchuan	It is an east-westward highway paralleling GD110 on the south location
7. GD207/GD303	Zhangjiakou-Xilinhot-Tongliao-Changchun	It is a east-westward highway connecting middle IMAR areas
8. GD301 Asia Hwy AH6	Manzhouli-Hulunbeier-Qiqihaer to Helongjiang	It is an east-westward highway in east IMAR and connecting Manzhouli to North-east Region of China.
B. Provincial Highway		
1. SD101/ SD309	Hohhot-Saihantala-Erlianhot-Xilinhot-Wuliyasitai-Wulanhot	The main west-eastern highway connecting north areas of IMAR, lower grade highway
2. SD211/SD104	Mandula-Bailinmiao-Hohhot (SD101) , to Baotou (SD211)	The north-southward highway connecting Mandula to Hohoot and Baotou, lower grade highway.
3. SD212/SD311	Ganqimaodao-Hailiutu-Wuyuan (SD212), to Baotou and Hohhot (SD311)	The north-southward highway connecting Ganqimaodao to Wuyuan, Hohoot and Baotou, lower grade highway and the section from Ganqimaotao to Hailiutu is under renovation.
4. SD312	Linhe-Dalaihubu-Hami, Xinjiang	It is a very important east-westward highway in west IMAE and connecting middle IMAR to west IMAR area. The highway pass through the sand area.
5. SD315	Ceke-Dalaihubu-Jiuquan, Gansu province	The north-southward highway connecting Ceke to Dalaihubu and Jiuquan of Gansu, lower grade highway and the section from Ceke to Dalaihubu is under renovation.

Note: *: GZ: National Main Highway **: GD: National Highway
#: SD: Provincial Highway AH-Asia Highway

The Erenhot to Zamyn Uud, Mongolia road of 9 kilometers is under construction and financed by China. This road is important to bilateral trade by connecting warehouse facilities at the border crossing. However, the central GOM is not cooperating over matters of the environment and technical supervision.

Dry ports along the Mongolia border are increasing integration for cross-border trade facilitation with a number of highway projects under construction. There is a need to maintain and upgrade these roads in order to withstand the heavy loads in the near term of construction materials to Mongolia mining sites and for coal shipments, and in the medium to long term of raw materials of coal and copper between Mongolia mining sites and Inner Mongolia.

Table 8: Dry Ports' Highway Construction Situation (North-South)

From-To	Length (km)	Class of Road	Plan (years)
Gadabuqi-Wuliyasitai	72	2	2006-2008
Erlian-Sehantala	122	1	2004-2006
Mandula-Bailingmiao	142	2	2006-2007
Ganqimaodao-Hailiutu	132	2	2006-2008
Ceke-Dalaihubu	85.5	2	2005-2006

(Source: Bureau of Communications and Transport Admin, IMAR)

Dry Ports

There are three main dry ports between China and Mongolia, but only one, Erenhot, has international status for highway and railway logistics functions throughout the year. Ceke and Ganqimaodao are seasonal ports with increasing traffic for the mining sites in Mongolia. Manzhouli dry port has international status for year-round traffic and trades with Russia, mainly. (see Table 9 below and Map 1 above)

Table 9: Dry Ports of Inner Mongolia Autonomous Region - Import-Export Throughputs, 2004-2006 (10,000 tons)

Year	Dry Port	Freight Volume	Percentage Change
2004	Manzhouli	14.03	38.8
	Erlian	608	31.43
	Ceke	156	258
	Ganqimaodao	3.7	646
2005	Manzhouli	17.52	24.8
	Erlian	710.5	20.5
	Ceke	185.5	18.9
	Ganqimaodao	38	923
2006	Manzhouli	1088.7	30.8
	Erlian	353.9	-1
	Ceke	87.8	-14.5
	Ganqimaodao	8.1	-18.5

(*Source: Port Office of the Government of Inner Mongolia Autonomous Region)*

In total, there are 14 dry ports which include highway, railway and river ports on the 3,193 kilometers borderline with Mongolia and the 1,010 kilometers borderline with Russia. This

year, China redefined “dry port” as International dry port open to third country goods, transport and passengers, and Ordinary dry port for bilateral trade. Central and provincial governments invest US $3.8 million per year in all 14 dry ports. More government attention is given to dry port development with support of ideas and funding.

Transport and logistics infrastructure is adequate in Erlian, but lacking in Ganqimaodao and Ceke. The transfer station at Erlian for trucks is to enlarge and recent improvements were made to depots and roads. Ganqimaodao has a Customs bonded warehouse and terminal, but will not require expansion until volumes increase. Freight volumes are increasing every year at all four dry ports.

However, logistics industry development is constrained. For example, the public bonded warehouse in Erlian has poor facilities impeding logistics functions for service providers such as, Sinotrans. Moreover, the overarching logistics constraint is the lack of implementation of the bilateral road transport agreement. To date, neither country’s trucks can operate in the other country’s territory beyond the immediate border crossing areas.

In Erenhot, trade is comprised of exports to Mongolia of light industry products, consumer products and fertilizers and imports of wood, steel and scrap metal. Transit traffic of oil, timber and other commodities from Russia accounts for 70 percent of Erlian’s border trade. In 2004, container throughputs via Tianjin seaport (Xingang) were 23,000 TEUs of which only 10% were exports from Mongolia. Tianjin Port Group handled 3.8 million TEUs in 2004 and Mongolia’s share accounted for less than 1 percent of the total.

Volumes of trade are increased from 15,732 TEUs in 2001 and costs are lower per TEU by US $50-200 on the all rail route and road/rail route between Tianjin and Ulan Baatar for imports. About 80% of both import and export containers now use the road/rail combination route because of the lower cost and more reliable transit time. For both routes, quotations for import containers include the additional charge to return the empty container to Tianjin because of the imbalance of imports to exports. In addition, there is a demurrage charge by ocean liners of US $ 20-30 per day, if the empty container is not returned to Tianjin within 30-35 days, which is frequently the case. So, the total cost for an import container can amount to US $2,150 compared to the apparent minimum tariff of US $1,050.

The expected transit times in the corridor from Tianjin to Ulan Baatar ranges from three to eleven days, but documentation problems could extend the time to over fifteen days. Logistics service providers (freight forwarders) quote rail only transit times as low as three days, but an expected time of between five and seven days because of delays waiting for Chinese rail cars at Erenhot (or at Tianjin in the reverse direction). The shorter time can be more certain if road transport is used between Erenhot to Tianjin.

Averages computed from data collected from a major user of the corridor shows eight days transit time for a container using the road/rail combination. Inbound bulk shipments by rail took 15 days per 60 tons maximum weight, but again only seven days minimum for the road/rail combination. However, the latter has a maximum load of only 25 tons compared to the 60 ton limit by rail. There is not a completed paved road between Zamyn Uud and Ulan Baatar which is not expected until 2009.

Customs delays and waiting for rail cars are often cited as the main reason for why rail freight takes so long. The waiting time for rail cars is particularly long in the winter when China Railways typically, uses all its available rail cars for transporting coal. In the summer, transport

of fertilizer can tie up the railcar fleet. The real constraints facing logistics industry development is not due to trade policy or tariff issues since tariffs were lowered in World Trade Organization accessions, but due to transportation, physical infrastructure and institutional problems in particular on the Mongolia side of border crossings.

Ganqimaodao and Ceke dry ports are Ordinary dry ports open only during certain periods of the year with special short-term bilateral agreements for extended openings. In 2005, Ivanhoe Mines Mongolia's Oyu Tolgoi construction site imported through Ganqimaodao 8,500 tons of supplies from China which is expected to increase by tens of thousands of tons when heavy project cargo is imported from third countries in 2007. International dry port status is needed for logistics functions throughout the year which requires a signed intergovernmental agreement and infrastructure upgrading on both sides and in particular on the Mongolia side at Gashin Sukhait dry port. Mining production exports of copper concentrates are planned in four years from Oyu Tolgoi, and of coal from Tavin Tolgoi to China.

Currently, Ceke imports coal by 200-300 trucks per day and exports daily products. However, trucking traffic is not stable due to the lack of implementation of the bilateral road agreement. This agreement needs renegotiation and amendment for logistics industry development on both sides. Mandula dry port is expected to develop with plans for railways. There is interest from Baotou Steel Company for Mongolia's mining materials, but this depends on Mongolia signing a contract. At present, Mandula does small border trade by people of leather products, animal products and agriculture products.

There is an underserved market of Mongolia consumers, construction workers and shopkeepers purchasing goods in China and returning to Mongolia with goods in large bundles. These less than trailer or container load (LTL/LCL) shipments are a basic consolidation function by logistics service providers. Bilateral logistics industry development requires services extended to this market. Customs estimated total volume of trade through Erenhot of 200,000 tons per year, but the figure is much higher based on the informal trade of the individuals and the small and medium enterprises (SME).

Inland Ports

There are four existing inland ports in strategic locations worthy of expansion programs that are indeed logistics hubs for facilitating trade with Mongolia and other countries. They are located from east to west:

- *Jining*-situated on the Erenhot-Tianjin railway line
- *Hohhot*-the base of the Hohhot Railway Foreign Economic Co. (HRFE) Logistics Park, and one of the two main Customs offices in IMAR
- *Baotou*-home to the Baotou Municipal International Container Transport Co. (BTICT) and the Baotou National Rare-Earth Hi-Tech Industrial Development Zone
- *Bayannao'er, Linhe*-Two logistics parks by the Bayannao'er Transportation Company

These inland ports are near main railway, highway and airport connections and are poised for assistance to develop logistics in order to meet the growth in mining, agriculture and processed products' sectors.

Jining is a key inland port because of its pivotal railway function for inbound and outbound traffic to Mongolia on the north-south and east-west lines which connect to Tianjin seaport. By 2008, Jining will transform from single to double track capacity to quicken the flow of cargo along this artery. Currently, there is a 25,000 ton cooling warehouse for IMAR harvested potatoes that serves the growing potato products markets.

The HRFE proposes to enlarge the Jining railway terminal and add facilities such as a crane and information systems. There is a 700 mu area selected for their terminal or cargo station. This logistics hub or container center will have both rail and road accesses. The location could be used to develop intermodal functions with an area for truck chasses and an area to serve the critical need for refrigerated facilities.

The Hohhot Railway Ruyi International Logistics Park has management over storage of appliances for Russia and Mongolia, delivery, distribution, packing and processing logistics activities. The services cover mining products from Russia and from west Baotou to coastal areas as well as for electronic products from Hohhot over the Asia-Europe container train. The Park is in an area of 66,700 square meters for logistics and production enterprises.

It is possible to use HRFE's joint venture Ulan Baatar Logistics Base as a bilateral transport and logistics network to expand beyond the current main business of mining products. It is also possible to determine why the Hohhot Ruyi Economic and Technological Development Zone is underutilized and investigate export processing possibilities in cooperation with Mongolian enterprises.

The Baotou Municipal International Container Transport Co. LTD. (BTICT) is a full service inland container depot for domestic and international transport, warehousing, packing, settlements, Customs clearance, insurance and bulk shipments. The depot is an extension of Tianjin seaport to facilitate ocean shipments and a critical link for cross-border trade with Mongolia to overcome landlocked disadvantages that both IMAR and Mongolia endure. BTICT is one of eight Inland Container Depots (ICDs) built by the China government with a World Bank loan.

The facility has a 28,000 square meter open yard; 6,658 square meter Customs bonded warehouse, 35 tractors, 2 cranes and 6 forklifts, electronic data interchange (EDI) with on-site Customs, Inspection and Quarantine Bureaus. However, the information systems are not connected to the dry ports, the e-Port or the development zones. Furthermore, a service provider found that there are railway access and coordination problems with only a function to receive cargo which impedes proper intermodalism practices. In addition, it was determined that there are not many containers in the center; there is not a good connection with the Xingang seaport and the market demand is not good, possibly from lack of awareness by potential business users.

BTICT is seeking assistance to expand its services to include refrigerated warehousing and an export processing area and is in need of logistics and transport management training classes. Demand for these services is from the dairy and agriculture markets. Recently, the container center began to service Ivanhoe Mongolia Mines, Inc. through their contracted logistics service provider in the construction phase of the Oyu Tolgoi mining project. Transport and logistics services will operate through the Ganqimaodao dry port which is 370 kilometers from the inland container depot.

BTICT: Possible location for expansion

Some of the other customers of BTICT are:

Inner Mongolia North Hauler Joint Stock Co
Terex Group
Inner Mongolia Select Textile Co.
Inner Mongolia North Baryval Engineering Special Vehicle Co
Atlas Construction Machinery
Baotou N. Benz Heavy Duty Truck
Batou Aluminum (Group) Co.
Baotou Zhaohe Rare Earth Hi Tech
Batou Huanghe Hi-Tech Plastic Co.

The ICD handles 908 TEUs per month. The Center works with IMAR potato farmers for transporting to a potato chip producer based in Beijing and Shanghai. The following indicate the growing volumes of potatoes transported by the ICD transport service from the Daqi, IMAR farms to the Beijing, Jining and Shanghai refrigerated warehouses:

Table 10: BTICT Transport From IMAR Farm

Year	Tons	Transport Times
2003 (Sept.-Oct. 15th)	4550	165
2004 (Nov.-Feb. 30)	2377	94
2005 (Nov.-Feb. 30)	9184	323
2006 (Aug. 31-present)	3700	137

The Baotou Rare-Earth High-Tech Industrial Development Zone is a State-level Enterprise Technology and Development Zone (ETDZ) in an area of 15 square kilometers in the south of Baotou. There are over 1,000 companies in the Zone from all over the world. Baotou is the most industrial city of IMAR with industries of iron and steel, rare earth, aluminum, machinery, electric power, coal, chemicals, textiles and sugar manufacturing. Baotou held 51.2% of the global rare earth materials output in 2001 and is considered strategically important to the PRC.

Transportation networks are by rail on the Jingbao, Baolan and Baoshan railways to North China and Northwest China and by highways to the national highway network. Air connections are from Baotou to major cities. Rail transport from Tianjin is not difficult, but from Baotou there are delays because of the seasonal rail transport bottlenecks.

The Rare-Earth Zone is seeking assistance and cooperation from various sources such as BTICT to develop a logistics base in the Zone. The plan is for a step-by-step approach in a joint venture arrangement with emphasis on information systems and containers. There is growing demand for logistics and transport services from the mining sector and serious consideration is given to exporting to Europe over the new Asia-Europe railway. A Chinese private copper manufacturer in the Zone expects 100,000 tons by the end of 2006 from 30,000 tons per year.

At present, volumes of cargo to Mongolia are very small of mostly sugar exports. The ETDZ have visits with Mongolia counterparts, but there are not any fixed institutional arrangements. Ivanhoe Mines Mongolia, Inc. visits the offices to discuss marketing the copper, once it begins production in a few years, to Chinese firms and to develop in the Zone, but there are not any concrete plans, yet.

In addition to the State approved ETDZs in Hohhot, Baotou, Manzhouli and Erenhot, there are the following economic development zones in IMAR:

- *Linhe Economic and Technological Development Zone*- mainly engages in grain processing, food drink processing, building materials, motor car repair and assembly.
- *Jinchuan Economic and Technology Development Zone*- mainly engages in textiles, machinery, electronics, computer system, telecommunication equipment, chemicals, food, metallurgy and building materials, etc.
- *Chifeng Qiaoxi Economic and Technological Development Zone*
- *Chifeng Hongshan Comprehensive Development and Test Zone*
- *Hohhot Jinchuan Resources and Technological Development Zone*
- *Hulunbeir Perfecture Hailar Economic and Technological Development Zone*
- *Xingan Perfecture Arshan Economic Development Zone*
- *Tongliao Economic and Technological Development Zone*
- *Chifeng Pingzhuang Economic Development and Test Zone*

Linhe, Bayannao'er has a good location and accessible rail and road networks to integrate logistics industry development with the abundant mineral, raw material, agriculture, and animal products of the economy. At present, the logistics facilities are very underdeveloped to support the growing demand across all sectors of this local economy. However, there are plans in need of assistance to connect Linhe and its economic potential with Mongolia, the northwest areas, and also to Beijing and Tianjin port so that Linhe becomes an inland port.

The Bayannao'er Transpotation Company is one of two entities in the area that are building in order to facilitate transport and logistics service demand. The Company's origins were as a passenger transportation company and transformed from a state owned to a stock holding enterprise in 2004. As a result, market oriented principles of matching supply with demand are not established since most of the fleet of 8,719 trucks in the area have low utilization rate as of 2005. Linhe officials consider the problem to be serious by which information systems, management training and trucking industry organization are the solutions.

The Company has two logistics parks in Linhe of 400 mu each. One is dedicated to transporting agriculture products of 6 million tons per year for maize, sunflower seeds, corn, tomatoes and milk. The park lacks modern facilities of covered and sanitary storage:

Moreover, there is a critical need in Bayannao'er for refrigerated facilities.

Jinquan Industrial Zone is the second entity near Linhe established to receive Mongolia coal and copper from Tavin Tolgoi and Oyu Tolgoi. A separate transport and logistics area is in the Zone to support the copper, coal and chemical factories and is part of a larger scheme of railway, highway and airport infrastructure. Demand on efficient logistics and transport infrastructure is critical to meet the Zone's plans of 30 million tons of coal washing to produce 12 million tons of coke; 400,000 tons of copper; 10,000 tons of nickel; and 5 million tons of methanol from processed coal. (2020 estimates)

Ganqimaodao dry port is in Bayannao'er and can be a catalyst in the logistics and transport development between Linhe, Inner Mongolia and Mongolia. To date, there is only one railway line, the east-west Baolan and an expressway parallel with the Baolan line. There are highways connecting to counties, villages and to Ganqimaodao via Hailiutu for a total of 8, 894 kilometers of which 88% are graded highways and 12% are poor. By density, Bayannao'er is below the national average of 20 kilometers per 100 square kilometers with 13.8 kilometers per 100 square kilometers. Finally, there are a lack of logistics and refrigeration facilities and terminals for rail and road which cause bottlenecks to meet demand. In 2005, cargo transport

volume was 26.2 million tons and highway cargo increased 12.2% in volume over 2004 or a 53% increase in ton-kilometers.

Trade Regime

Information Systems

Modern information technologies are deficient in the logistics industry in need of development assistance. There is an e-Port information system and plans to upgrade, but not a comprehensive program to enable all stakeholders to share real-time logistics and transport information on developed country standards of automation and Web-based track and trace functionalities (i.e. GPS, RFS, AWS, ERP, ITS, RF). However, Customs and quarantine-inspection have EDI with BTICT. Modern automated systems will be essential as volumes of shipments across all sectors of the economy increase to meet production schedules and consumer demand.

There is a concerted effort by the IMAR and central governments to share information and systems. The central government policy called for 8 ministries to promote information sharing among Customs, Ministry of Commerce, National Development and Reform Commission (NDRC), quarantine, Ministries of Communications and Railways with a central information office administered by the State Council. In 2004, the newly created, IMAR Information Promotion Office, Hohhot started a program to share trade information which resulted in the opening of a new e-Port network in April, 2005.

The e-Port platform is a step towards more advanced technology such as e-Commerce or automation, and the "One Window" concept whereby all actors in the trading community can share information in real-time. At present, the e-Port objective is to develop an information network with Customs and the Foreign Trade department. The system works with an IC card over an Internet connection for large shippers and companies to obtain information on documentation, policy, catalogues and services from Customs, Quarantine and Foreign Trade. By July, 2006, 1,047 enterprises registered and were issued 2,450 IC cards.

The system's shortcomings are that it is for one way communication and not interconnected to Mongolia or with all the dry ports. Although, in 2006, a Mongolia-IMAR network started with the respective information technology departments and led by Mongolia Chamber of Commerce and the IMAR Chamber of Commerce with IMAR financing. The Port Office of IMAR recommends the IMAR e-Port construction as a public infrastructure and logistics platform project in two phases:

1.) Construct a network, Research & Development, users pay software system (US $430,380)
2.) Construct facilities, hardware, networks, security protection (US $215,200)

Other initiatives to develop critical logistics and transport information systems in particular for a farmers trade market, are as follows:

- *Logistics Information for Bayannao'er Transportation Group*-Assistance given from IMAR Information Promotion Office for a connection to build their own transportation information system with GPS and GIS for some of their 2,700 trucks to perform track and trace on a platform build in the company headquarters.

- *Information Office, IMAR and Tongliao Logistics Park-* Building up a cargo transportation information tracing system. This system is in cooperation with the local transportation management bureau and the Harbin Industrial University.

- *Xilinguole Prefecture-Ankuai Logistics Company-*Ankuai, a private logistics company, mainly handles logistics services for animal products. A Beijing information company is to develop a cargo information system for them (www.ak56.com.cn)

- *Baotou Government-Tianlin International Cargo Transport Group, Hong Kong-* Cooperation planned to build a modern information logistics base, but no action, so far. Asian Development Bank assistance sought. (US $67 million)

- *Public Information System-*The main task is to build an information system platform in cooperation with IMAR Economic Commission to provide services for Small and Medium Enterprises (SME) and to promote development of SMEs since 99% of IMAR is comprised of SMEs. Rural areas are the focus of the public information system for farmers trade market and farmer information. The objective is to build up rural information service system in all counties in three years. This would be beneficial to the inefficient vegetable transport system of lining up for countless hours with wagon loads of tomatoes. This would assist in the development of the refrigeration capacity needed for the fresh fruit and vegetable markets.

Refrigeration Capacity

A significant constraint to logistics industry development is the lack of refrigerated equipment and management expertise. There is a critical need for refrigerated warehouses at dry ports and inland depots together with the refrigerated containers (reefers) for trucks and refrigerated box cars for railways. This equipment requires technical training on railcars, and plugs when the containers are stacked in stations. The following industries show a loss of earnings potential and tax revenue from cross border and other potential export market opportunities: fruit (melons) and vegetables (tomatoes,potatoes); meat; dairy; and food catering.

Box 1. IMAR Tunhe Hetao Tomato Juice Co. in Bayannao'er Prefecture

The IMAR Tunhe Hetao Tomato Juice Co. Ltd. (THTJ) is jointly invested by Bayannao'er and Xinjiang Tunhe Group whose tomato juice export volume ranks second in the world and first in China. THTJ is located in Hangjinhou county, Bayannao'er with an area of 200 mu. The company has a raw material base with an area of 60,000 mu. THTJ began production in June, 2004 based on the tomatoes harvested and transported by the farmers to the factories. The production capacity at the plant for tomato juice is 45,000 tons and approximately, 300,000 tons of fresh tomatoes are needed. At present, THTJ processes 3,000 tons of fresh tomatoes every day with an annual production value of US $15.1 million and an annual total benefit from taxes of US $1.9 million. Export markets are in Japan, Europe, Canada and the United States.

THTJ is becoming a modern agriculture industrial enterprise leading the local agriculture development. In 2004, THTJ signed 183 contracts with farmers of 20 towns and townships of Hangjinhou county and Linhe district, Bayannao'er, and about 40,000 mu of tomato were planted to supply the fresh tomato juice production. THTJ also provides technical assistance for farmers to plant tomatoes and prevent plant diseases.

The tomato supply chain systems to production are very inefficient due to the lack of refrigerated facilities. Farmers' tractor-trailers are overflowing with tomatoes and wait 3-4 days in lines that stretch for at least a mile to unload tomatoes at tomato factories. Factories do not have refrigerated or cooling warehouses therefore, production can only occur in the harvest seasons and not in the winter.

Tomato Farmers Wait in Lines

Also affected by the lack of cold chain logistics practices and management are the supply chains of potato farmers near Baotou for the potato chip factories in Beijing and Shanghai. The truck and railcar shipments move via Jining to a refrigerated warehouse. There is export potential to Russia of potatoes with refrigerated containers. Currently, the orders of magnitude are 25,000 tons in 1,000 forty equivalent unit (FEU) containers during the harvest months by truck over congested roads near Badaling. Rail transport is the preferred mode for bulk transport, but there are no loading facilities in the railway station. So, potatoes are put in 30 kilogram bags then into containers and loaded onto trucks from the farms to rail boxcars with the use of refrigerated containers in the winter. Additional businesses in need of cold chains in IMAR are French fried potatoes and food catering businesses to personnel at mining sites in Mongolia via Ganqimaodao.

Customs Administration

Efficient and secure external trade depends on smooth clearance of customs and trade documentation formalities. Transit cargo from Russia accounts for 70 percent of IMAR-Mongolia trade, yet there are shortcomings even for low volumes of bilateral trade in need of reform up to international practices so that higher volumes can speed through. Some of the issues are:

- A problem of delays from documentation involves harmonization of product descriptions, or classifications, and valuation lists of products. Languages used are Chinese, English, Mongolian, or Russian and there is room for error in translation of products. As a result, the whole process stops to rewrite the papers. Also, Mongolia has a different tariff system than China. China follows the Harmonized Tariff System (HTS) , World Customs Organization and World Trade Organization standards. Finally, there are too many documents to settle in Zamyn Uud which can take up to one day, according to one Chinese logistics provider.

- Chinese and Mongolian customs have good relations, although differences in information systems create obstacles to trade. General information and statistics are shared, but not detailed information, especially for national security. China claims Mongolia information systems are backward based on the proprietary system, GAMA, as opposed to China's advanced platform. However, China has yet to establish trade data connectivity with trading partners for generating accurate trade statistics. Trade statistics are important to national accounts and in measuring performance for matters of improving trade facilitation.

- There is not a mutual agreement on inspection standards for animal products in particular. As a result, there are costly delays and loss of potential business. China customs and quarantine bureaus believe Mongolia inspections by laboratories are not as strict or as standard as China's.
- Cargo is stolen in Zamyn Uud. By day, Customs or logistics service providers (LSPs) supervise the cargo in the open or in storage areas. No one knows how goods are stolen. China Customs claims that the law system in Mongolia is flawed and that in practice there is not any enforcement.

Border and central Customs administration meet regularly during the year. Hohhot Customs is organizing an expert group to study common border issues by a *China-Mongolia Customs Cooperation Expert Group.* There are specific goals to reach an agreement on pressing cross border issues:

1.) Inspection Results for All Products
2.) Common Documents
3.) Common Information Systems Platform

Banks

Modern payment processing systems are necessary to border trade in services to shippers and intermediaries for the sake of timeliness and security of transactions. Since 2002, IMAR and Mongolia local banks began banking relationships because of a central bank agreement in 2001. The Agriculture Bank of China has an Ulan Baatar branch for USD, RMB and Mongolia tugrugs and roubles exchanges. Two days are the normal time to process payments at the border. Erenhot settlements are done quickly because of good systems and the ability to facilitate settlements with other currencies such as the US dollar. Imported coal is by Chinese yuan and letters of credit (LC) are seldom used except for the cement business. Terms of trade are used, mainly. Some of the issues confronting cross border services are:

- The Mongolian government is not connected with the Chinese system and the development is not very good. Customs, banks, insurance and big customers can use the e-Port system in China, but there is not a similar system in Mongolia.

- There is a central government to central government dialogue system, but there is not a similar dialogue between local governments of IMAR and Mongolia. A need exists to improve the central to local coordination of communications and policies on a periodic basis.

- Erenhot financial system infrastructure and facilities are good, but not perfect. The other dry ports' infrastructure is not good and the financial facilities and service are poor. For example, buyers and sellers take bags of money in cash for transactions at other dry ports such as in Ceke and Ganqimaodao.

- Letter of Credit are not used because of the risk with Mongolia banks. Chinese banks can provide every service, if Mongolian banks have good credit.

- Chinese foreign exchange administration (SAFE) is very good, but Mongolia's is not good without a foreign exchange administration and without dialogue on how to cooperate.

- Chinese yuan (RMB) is used as the currency of settlement on imports because of the inflation of the tugrugs and the USD devaluation. Hence, local banks can not change the US dollars, quickly. The Agriculture Bank of China stopped this service to customers.

C. Existing Legal Framework for Cross-Border Transport

Box 2 China's Agreements Relating to Transport

(a) *Transit Agreement with Mongolia (1991)*

(b) *Road Transport Agreement with Mongolia (1991)*

This agreement provides the broad framework to develop cooperation on road transport for mutual benefit of the economic and trade relations of these countries. The articles stipulate freight and passenger transportation on the road that is authorized for the period (seasonal) when the checkpoint (dry port) is open and that single entry and exit permits must be obtained. Typically, temporary openings are in the months of March, May, August and November from the 16^{th}-30^{th} of each month.

(c) Road Transport Agreement with Mongolia (2003)

This agreement is a revision of the 1991 agreement with Mongolia to approve opening of Erenhot, Zhuengadabu, and Takeshenkeng for third country cargo, traffic and people.

(d) *Special Road Transport Agreements with Mongolia (2005, 2006)*

The 2006 agreement renews the 2005 agreement for permanent border opening status from February 15 to December 31, 2006 at Ganqimaodao crossing to allow Ivanhoe Mines

Mongolia, Inc. to pass through the border to transport equipment and materials from China to Oyu Tolgoi in the South Gobi, Mongolia. Also, to allow coal imports from Tavin Tolgoi and to allow the same opening at Ceke and Zhuengadabu border ports for oil, lead-zinc, and coal imports.

(e.) *Trilateral Agreement*

China, Mongolia and Russia began negotiating ten years ago on a transit framework agreement (UNCTAD, 2001). The agreement should provide for guaranteed freedom of transit by all modes of transport between and within the three countries and promote the simplification, harmonization and standardization of customs administration procedures and trade documentation.

(f) *The 1965 New York Convention*

Mongolia signed to the Convention which relates to transit trade of landlocked countries. The Convention recognizes that the transit trade of landlocked countries (comprising one fifth of the world) is critical to economic cooperation and expansion of international trade. To date, China has not acceded to this convention and is not bound to its principles.

Despite the agreements and subsequent revisions, there is much dispute over the implementation. Mongolia lacks truck capacity. Therefore, Mongolia rules require that Chinese trucks must be sent to Mongolia and use Mongolia license plates and a transport licence in order for a Chinese trucking company to import coal from Mongolia. Furthermore, Mongolia trucks are not allowed to cross the border beyond a certain distance.

As a result, coal transport is not operating as scheduled at Ganqimaodao as stated in the contract between the Chinese trucking company and Mongolia. In 2001, planned coal transport volume was one million tons, but actual was only 20,000 tons and in 2005 less than 400,000 tons was transported. In fact, the Mongolia coal mines have an annual capacity of two million tons. In addition, Mongolia's technical supervising and transport management departments impede the coal transport by charging tariffs with claims that Chinese trucks are overloaded and pollute the environment.

Chinese law requires over one million tons of coal to cross the border per year before permanent border status is permitted. Apart from coal volumes from various companies, Ivanhoe Mines Mongolia, Inc. plans to import project cargo of 400,000 revenue tons cubic capacity or dead weight tons over the next three years. Re-negotiating and amending the transport agreements would eliminate the constraints to bilateral trade transport and begin permanent, third country freight status, especially at Ganqimaodao.

The Transports Internationaux Routiers (TIR) Convention

China's accession to the Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention) [1] would result in improving conditions for developing

[1] The Customs Convention on the International Transport of Goods under Cover of TIR Carnets was elaborated under the aegis of the United Nations Economic Commission for Europe (UNECE). It has its origins in two draft UNECE Conventions-on commercial vehicles and on goods transport by road-which entered into force on June 16, 1949, but were of a provisional nature and covered only a small number of European countries. However, as regards goods in transit, a way had to be found to seal the goods in order to apply the transit bond-note system to transport operations and to enable the Customs formalities applicable to imported goods to take place at destination rather

intermodal transport and logistics services as well as boost trade across regional and international corridors. The TIR system is designed to reduce delays at border crossings by allowing transport to move from origin country to destination country for bilateral and through transit trade without Customs formalities at each border crossing. The system operates across all modes (ocean, rail) so long as one segment is by road. Benefits to the transport industry and Customs are to reduce: transport costs, documentation, security risks, inspections, and to guarantee duty payments and the efficient use of Customs personnel.

China has not acceded, but is researching and acceding to the various conventions required and formed a group to review the conditions of infrastructure and policies. The group is comprised of departments involved in cross-border transportation as follows: Customs (lead), Ministry of Communications, Ministries of Foreign Affairs, Finance, Public Security, the Quality and Inspection Bureau and the China Road and Transport Association (CRTA). Their report to the State Council will be entitled, "Study of China Entrance into TIR."

The United Nations Economic Commission for Europe (UNECE) and the International Road Union (IRU), the authorizing institute for issuing TIR carnets and for the approval of the customs guaranteeing association of a country, offered assistance to PRC Customs and CRTA on the accession and implementation of the TIR Convention. A final decision on China's accession will be made in 2007. The TIR system began in Mongolia from June, 2003, but is not operating fully because of a lack of training. Russia is also a member of the TIR Convention.

The conventions under review by the PRC are:

- Customs Container Transport Convention
- Road Traffic Convention
- Road Marks and Signals Convention
- Harmonization Control for Goods at Frontier
- Convention for Vehicles and Temporary Import/Export which are contained in UNESCAP Resolution 48/11

D. Globalization and Logistics Development

Strategies of sourcing raw materials and production are not confined to geographic areas. Multinational companies seek low costs in any location worldwide and depend on highly efficient transport and logistics networks. A key link to servicing customer requirements for adding product value and on time delivery is the logistics center. The components of a logistics center depend on the specific demands of industries. Typically, a logistics center contains one or many of the following:

- Distribution Center
- Customized Warehouse
- Inland Container Depot
- Container Freight Station

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than at the border. The solution was found by using approved vehicles which were effectively sealed and by resorting to the, equivalent to the 'carnet de passage en douane' required for road vehicles. The TIR Convention was revised in 1975 taking into consideration the technological progress and the experience in the operation of the system. Indeed, a new method of transport had emerged with the sea container, followed by the inland container and swap-body to facilitate rail-road combined transport (intermodalism). Since its entry into force in 1978, the TIR Convention of 1975 has been updated 20 times. The most recent amendments came into force on May 12, 2002.

- Rail/Road Access with Interfaces

In IMAR, there are established logistics hubs and developing logistics centers comprised of facilities and services in need of public-private partnerships. Improved logistics centers can overcome the constraints of distance to markets that characterize IMAR and Mongolia and boost the mining, agriculture and processed products industries thereby reducing poverty.

E. Logistics Industry

The logistics industry in IMAR is in the early stages of development. There are a few major logistics service providers and hundreds of private trucking companies of 1-2 trucks that claim to be logistics providers, but lack the wherewithal to offer modern logistics offerings. The main logistics companies are: Sinotrans, HRFE, BTICT and its affiliate, Baotou Swift West Logistics Co., LTD and the newly established from state owned, Bayannao'er Transportation Company. All of these companies are quasi-state owned or converted to joint stock companies, recently.

Modern information systems are the mechanism to promote logistics, freight forwarding and transport functions towards international standards and practices to the benefit of companies of all sizes in all areas of IMAR. The e-Port platform is capable of unifying the trade and transport activities and goals of various stakeholders. The e-Port is in the very early stages since it began only last year.

The PRC central government's policy of information sharing through State Council administration and IMAR's newly created Information Office sets the path for short, medium and long term agendas for advanced logistics industry systems. Some of the agendas to develop information systems require more research and professional technical advice before sourcing funds and implementing. The agendas are found in the Port office of IMAR's plan to construct the e-Port system and the IMAR Information Office outlined other initiatives. (see pages 21-22) Also, banks, customs and Bayannao'er prefecture stressed the importance of information systems to develop the trade and logistics industry of IMAR. These three important stakeholders set agendas to connect with Mongolia and other markets by common platforms for documents, inspections and financial services. (see pages 24-25)

Apart from information systems, the main logistics providers emphasized some shortcomings in the facilities at key logistics hubs and suggested plans to improve. Sinotrans proposes another phase of construction projects at the Erenhot Dry Port Bonded Warehouse. The estimated investment is US $1.235 million for container handling equipment (crane-1 unit and forklift trucks-4 units); harden the ground for operations; and build an open-air warehouse and platform. A loan of US $1 million is expected from the ADB.

The HRFE proposes expansion in two inland ports. The first is in Erenhot for an international intermodal cargo logistics center. The planned facility is comprised of seven areas for storage, container handling and packing/processing as the main areas over 2,500 mu for 8 million tons per year at a cost of over US $10 million. The second is in Jining for a logistics center which is a pivotal railroad inland port for north-south and east-west traffic. The main facilities include storage, container handling and transport as well as a processing area over a total area 1,000 mu for 4 million tons per year at a cost of US $6.3 million.

The BTICT proposes expansion plans to better position the inland port for the growing mining and agriculture industries. These plans are in connection with the Baotou Rare Earth

Development Zone and third party logistics providers that are serving the Oyu Tolgoi mining site in Mongolia. Some of the proposals are to improve the railway transport with more load/unloading equipment such as cranes as well as better EDI connectivity to Tianjin seaport and Customs for railway shipments. Also, to build a bonded warehouse and refrigeration warehouse and to have container scanning equipment and more training programs.

Bayannao'er local government envisions Linhe, Wulate and Hongjinghou to become logistics hubs by 2020. The phased approach plans to develop around the main areas of the economy for chemicals, construction materials, coal, agriculture, and public logistics systems for consumer products with refrigerated logistics and other specialized transport facilities. Ganqimaodao is a central node of the logistics development strategy for the region. To date, the government constructed a linking road to the dry port by Hailiutu. The main stakeholders are Jinquan Industrial Zone, metal factories and farmers.

IMAR's logistics industry as a whole is constrained from advancing into offering customer services. These services are seamless goods movement across borders and provinces and value added activities of tracing shipments and specialized packaging along with more mature service innovations to name a few. The reason is the lack of industry organization and training. The increasing demand across all sectors in the developing economy combined with globalization of sourcing and manufacturing will prove the uncompetitiveness of basic goods transport from point A to point B.

It is in IMAR's best interest to organize the logistics industry and the trucking industry into professional associations to distinguish companies with logistics service offerings of end to end goods management for customers from the basic trucking companies. The organizational framework can have provincial, regional and local level representation and link into national and international organizations for best practices and knowledge dissemination. Furthermore, the companies can divide into their respective customer orientation whether by agriculture, building materials, refrigeration or intermodal. These associations will provide a basis for registration, training and certification which will assist in enabling FIATA or other training mechanisms. The institution of industry associations can consolidate the industries and open up more competition along market based principles for better service and lower costs and not along the oligopolistic principles of a few companies.

Chapter III. Recommendations and Action Plan on IMAR Logistics Industry Development

The growth of the IMAR economy is putting increasing pressure on the transport and logistics infrastructure underscoring the inefficiencies in the trade regime. The economic potential from the wealth of natural and human resources depends on the integration of the logistics industry with all industries of IMAR and in cooperation with Mongolia. The recommendations below are formulated to implement the strategic logistics industry agenda for the mutual benefit of IMAR and Mongolia.

A. Legal Framework and Policy Related Actions

The PRC issued suggestions to promote the development of a modern national logistics industry in August, 2004. The statement was led by the National Development and Reform Commission (NDRC) among related ministries and associations as members to coordinate national and regional modern logistics plans. It is important that IMAR and Mongolia find a way to integrate infrastructure resources among the different departments at the local government levels and not just from the central governments so that intergovernmental agreements are implemented and transport disagreements are resolved at the borders, expeditiously.

Specific action by IMAR and Mongolia

(a) Meet regularly to review and amend the road transport agreements to eliminate disputes on the crossing of trucks over each countries' border and not just at the central government, but also at the local government levels;

(c) Devise a plan to form joint venture trucking firms to share transport and logistics resources for the common goal of raw materials' transportation;

(d) Form a bilateral committee to review the TIR system for cooperation and training purposes.

Supporting role of international organizations (ADB)

(a) Assist in articulating and documenting the problems faced by local transport providers and serve as a mediator to resolve the disputes between the local governments. Make possible suggestions for amending the road transport agreements;

(b) Provide information on best practices for bilateral joint venture transport and logistics firms. Facilitate meetings and set agendas to bring concrete results in the short term;

(c) Assist in organizing the meeting between the responsible departments of IMAR and Mongolia for establishing a committee to review the TIR system issues on a regular basis. Seek assistance from CRTA and the National Road Transport Association of Mongolia.

B. Improving Transport Networks and Corridors

Logistics service providers are constrained from offering services that rely on timely deliveries at a low cost. Inadequate rail and road infrastructure requires massive capital outlays to reach developed country standards. In the short term, the priority is to maintain existing road infrastructure to serve the immediate needs of mining, agriculture, and processed products transport. In the long term, the construction of new roads and rail lines based on the strategic needs of local governments and the interested industries.

Specific action by IMAR

(a) Meet with stakeholders from key industries in Hohhot, Baotou and Bayannao'er and prioritize routes and investment requirements for road and rail transport;

(b) Explore the creation of public-private partnerships to finance and operate transport infrastructure in cooperation with existing firms in the mining, agriculture, processed products and logistics industries;

(c) Create databases to indicate the growing demand by each industry on the transport networks to justify priority investments. Show the need to integrate the IMAR network in the Asian Highway and Asia-Europe Rail Landbridge on a medium to long term basis.

Supporting role of international organizations (ADB)

(a) Assist IMAR in finding capital resources for rail and road construction. Present best practices in build-operate-transfer (BOT) or similar programs found in Hong Kong, for example;

(b) Assist in organizing meetings and agendas with IMAR, Mongolia and key industry players to map out short, medium and long term rail and road transport needs;

(c) Facilitate meetings to find solutions to the rail gauge, quarantine and container problems encountered by the new Asia-Europe Railway.

C. Expansion at Dry Ports and Inland Depots

The existing key dry ports of Erenhot and Ganqimaodao and the inland depots of Baotou, Linhe and Jining need to expand in order to increase the value add activities required by logistics providers to serve customers. A higher value add to weight ratio of products reduces the high cost of transport to the total value of a product and thereby lessens the impact of IMAR and Mongolia's distance to markets. There are shortcomings in equipment and facilities at each dry port and inland depot that prevent the full operation of logistics functions.

Specific action by IMAR

(a) Develop a master list of priorities for upgrading the facilities and equipment at the ports and depots based on the suggested requirements of the logistics and transport users;

(b) Create a market demand forecast to find the short, medium and long term needs in relation to the road and rail transport construction at Erenhot, Ganqimaodao, Jining, Baotou, Hohhot, and Linhe. The forecast will include an export processing area scenario;

(c) List potential financial resources and create public-private partnerships to finance the facilities and equipment;

(d) Consider the following projects:

- *Ganqimaodao Port*-construct an office building and facilities for inspection, communications, electronic instruments (US $531,645).
- *Ceke Port*-build a warehouse center of 24,000 square meters (US $5 million).
- *Erenhot Port*-improve the facilities at the public bonded warehouse and build a yard to store coal.
- *Jining*-railway terminal enlargement and new facilities and equipment in 700 mu for a logistics hub with rail and road access.
- *Baotou*-BTICT needs equipment for loading and unloading (crane, hoist) in rail transport and for container scanning.
- *Linhe*- logistics center: distribution and customized warehouse for fruit and vegetables.

Supporting role by international organizations (ADB)

(a) Assist IMAR in listing the priority projects to finance for the short, medium and long term logistics industry development. Motivate public-private partnerships to finance expansion which could include concessioning at dry ports and inland ports;

(b) Advise IMAR on modern logistics center best practices in the mining, agriculture and processed products industries. Take examples from developed country practices in Australia, Canada, the USA by organizing study-tours or for companies to visit IMAR.

D. Building Refrigerated Capacity

There is an urgent need to examen market demand forecastes for the proper location of one or two public refrigerated warehouses (PRW) in IMAR. The establishment of the PRW can serve as an important demonstration effect whereby knowledge of the “cold chain” can spread on equipment uses, management practices and food science. The transport infrastructure of refrigerated trucks, containers (reefers) with plugs and refrigerated railcars will coincide with the PRW. The development of refrigerated capacity impacts fruit and vegetable, meat, dairy, and catering businesses for intra-provincial and international trade growth as well as reduces the region’s landlocked constraints.

Specific action by IMAR

(a) Motivate and request a market demand study for a PRW from each of the dry ports and inland depots. The study will include a survey of IMAR industries and businesses with refrigeration requirements;

(b) Write a business plan based on the market demand study for the size of a PRW, equipment, optimal location, training needs, and capital budgeting requirements;

(c) Investigate the possibility of concessioning the PRW in a build-operate-transfer (BOT) scenario after five years;

(d) Request assistance from Little Sheep Catering Company, Tianjin Port Group and an ocean container liner in knowledge gathering for best practices in financial advantages, technology requirements and distribution;

(e) Organize study-tours to the United States and take membership in the professional organizations of the International Association of Refrigerated Warehouses (IARW) and the World Food Logistics Organization (WFLO).

Supporting role of international organizations (ADB)

(a) Provide guidance to IMAR Port office, Information Promotion office and Transport departments to establish a separate office for the development and implementation of refrigerated logistics;

(b) Facilitate the demand study and business plan with technical assistance and mobilize financial support in building a PRW.

E. Promoting Intermodalism

Inland interfaces for rail and road modalities are important to efficient flow of bulk raw materials and containerized shipments in a modern transport and logistics network. The facilities and equipment required to move shipments from one mode to another are proper inland depot yards, cranes and truck chasses which are an extension of those intermodal functions found at Tianjin Port. IMAR enhances its inland position as a gateway to bilateral and cross frontier trade by building intermodal capacities. The transport demand from IMAR's pillar industries mandate a short, medium and long term intermodal system.

Specific action by IMAR

(a) Gather requirements about intermodal facility and equipment requirements from dry ports and inland depots with a short, medium and long term scope of work;

(b) Prioritize intermodal transport investment requirements for building the infrastructure at one dry port and one inland port.

Supporting role of international organizations (ADB)

(a) Assist the IMAR Port, Transport and Information Promotion offices as well as Customs in knowing the best location(s) to position intermodal interfaces of cranes and chasses for container trucks;

(b) Assist in planning for intermodal functions to link with the Asia Highway and the Asia-Europe Railway (Hohhot);

(c) Assist IMAR in creating an environment receptive to private sector participation in the construction and operation of intermodal systems by guiding a bidding process or request for proposals (RFP/RFQ)

F. Building Information and Communication Technologies (ICT)

ICT software and networks can bridge IMAR and Mongolia to international markets, improve transport efficiency by instituting performance measurements and provide automation of trade and Customs documentation. The IMAR e-Port platform is a starting point to build ICT applications and an excellent means to train the logistics industry community. In addition, information can be collected for accurate trade statistics.

Specific action by IMAR

(a) Expand and upgrade the e-Port system to include automation (Electronic Commerce) and interactive functionality. Implement the two phase approach of (1) construct a network, research and development, and user pay software system (US $430,380) and (2) construct facilities, hardware, networks, security protection (US $215,190);

(b) Strengthen the *IMAR-Mongolia Network* that began with the respective Chambers of Commerce and information technology departments. Develop the networks to provide connections at Erenhot and Baotou with the other dry ports and to the inland depots in a defined time frame. Work to overcome the incompatibility of the IMAR-Mongolia (GAMAS) Customs' systems;

(c) Explore the upgrading of e-Port to a "One Window" system by using the United Nations' model as technical advice or the Automated System of Customs Declarations (ASYCUDA);

(d) Initiate regular meetings by IMAR Information Promotion office with various information system plans:

- Bayannao'er Transportation Group logistics information system
- Tongliao Logistics Park
- Ankuai Logistics Company
- Baotou-Tianlin Group
- Public Information System for farmers' trade market

Set common objectives and platforms for interoperability to avoid conflicting and incompatible information systems;

(e) Institute a database system for collecting trade data for purposes of statistics and performance measurements to improve management practices;

(f) Utilize the e-Port system to disseminate logistics and transport training programs and create an awareness program to educate the logistics community that the system is available throughout IMAR;

(g) Link the e-Port to the Ministry of Railways Transport Management Information System (TMIS) and the information technology development strategy for the sake of rail car availability and scheduling for LSPs.

Supporting role of international organizations (ADB, UN, WCO)

(a) Assist IMAR and Mongolia in developing a plan and implementing a common platform based on UN ASYCUDA, "One Window" and/or World Customs Organization standards;

(b) Provide advisory services and a forum to IMAR Information Promotion office on the various IMAR information system initiatives;

(c) Mobilize financial resources through domestic and international initiatives and by international donor assistance to create public-private partnerships to finance and operate ICT applications;

(d) Provide guidelines on benchmarking for database creation of trade statistics and transport performance indicators.

G. Trade and Transport Facilitation

The growth of IMAR's economy underscores the demand and stress exerted over the limited transport network capacity and inadequate logistics infrastructure. However, the World Bank proved in a 2006, "Doing Business Report" that infrastructure accounts for 25%, and trade facilitation, 75% of trade-related transaction costs and delays.[2] Seamless movement of raw materials and finished goods within IMAR, across borders and overseas depends on simplification and harmonization of trade, customs and transit documentation. Modern information systems provide the means to expedite processes. Better organization of the trucking and logistics industries provide the way to implement standards for more competitive costs and innovative services.

Specific action by IMAR

(a) Institute a local and provincial trucking, logistics and supply chain council to link with the PRC council and international organizations in order to share information and industry best practices;

(b) Construct a registration and certification system for trade intermediaries (trucking, logistics, supply chain) of IMAR and a grading systems based on the firms' facilities and resources;

[2] "Trading on Time", Doing Business Report, Djankov, Freund, Pham, World Bank, 2006

(c) Provide an open forum for the Customs' initiatives of the *China-Mongolia Customs Cooperation Expert Group* with other interested groups in attendance such as the Port office and Information Promotion office. Set a time frame to resolve and enforce changes to:

- Inspection Results for All Products
- Common Documents (classification (HTS) and valuations)
- Common Information Systems Platform

(d) Consider a dry port (Erenhot) to have a common facility to ensure inspection and approval of animal products from Mongolia;

(e) Initiate and facilitate meetings by local governments of Mongolia and China of dry ports to discuss banking issues related to improving systems to process border transactions and to coordinate policies from the central governments. The goal is to have IMAR-Mongolia systems on equal levels of development for all financial services.

Supporting role by international organizations (ADB,UN,WCO)

(a) Provide advisory services and support with concrete guidelines to upgrade in a phased approach to modern trade systems. This includes linking IMAR into the International Federation of Freight Forwarders Association (FIATA) certification programs;

(b) Ensure input from WCO and ADB customs experts so that the *China-Mongolia Expert Group* brings meaningful change;

(c) Offer assistance to local governments and local branches of banks in IMAR and Mongolia on issues of letters of credit and foreign exchange forward contracts as well as other financial instruments and systems needed to conduct border trade in a secure and efficient manner;

(d) Coordinate and advise BTICT on intermodal, refrigerated warehouse (PRW), marketing, and equipment projects in order to increase the marketability of the ICD.

H. Capacity-Building and Logistics Human Resource Development

There is a keen intent in IMAR for knowledge and structured training in modern logistics, trade and transport practices. The trade community needs dissemination of information on national logistics policy, TIR, tools to measure logistics performance and data automation to name a few.

Specific Action by IMAR

(a) Utilize the e-Port to display information on training programs and develop the interactive technology for conducting on-line training programs;

(b) Structured training classes to industry specific logistics requirements (i.e. mining, agriculture, processed products, refrigeration, freight forwarding, Customs, intermodalism);

(c) Seek assistance from established logistics training providers such as FIATA and the World Bank/UN Global Trade and Transportation Facilitation (www.gttf.org) , or from private industry sources.

Supporting role of international organizations (ADB,World Bank, UN)

(a) Provide assistance in establishing a structured and routine training programs to the trade community and government officials as well as inform on sources of financing of training programs;

(b) Assist in developing relations with international organizations and the available on-line training systems;

(c) Contact the United States based: "Cochran Program" (U.S. Senator Cochran) about the food industry professionals' training of developing nations in agriculture best practices. Refrigeration logistics practices are included.

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World Bank (1999). Mongolia: Taming the Tyrannies of Distance and Isolation: A Transport Strategy for Mongolia. Washington.

Annex A List of Organizations Interviewed

Organizations	Persons
Bureau of Communications and Transport, Inner Mongolia Autonomous Region	Mr. Wang Xue Ming, Vice Director
Department of Commerce, IMAR	Mr. De Shun, Deputy Chief
Information Office of IMAR	Mr. Mou Zhongwei, Director
Port Office of IMAR	Ms. Bao Chun Jing, Deputy Director
Sinotrans, Hohhot, IMAR	Mr. Wei Quan,Manager; Mr. Ma Tonghai
Inner Mongolia Hohhot Railway Foreign Economic & Technological Corp. Group	Mr. Zhang Zhongping, Vice General, Mr. Yang Junjie, General Manager
Agriculture Bank of China, IMAR	Mr. Su Zhenyu, Deputy General Manager
Hohhot Customs District	Mr. Song Jun, Deputy Director
China Road Transport Association, Beijing	Mr. Zhang Guanghe, Vice Director
Baotou Municipal International Container Transport Co.,LTD	Mr. Yu Peifeng, Vice General Manager Ms. Sally Yang, Marketing Mr. Rong Xiangchao, General Manager
Pepsico International, Shanghai	Mr. Bob Shi, Operation Director
Baotou National Rare Earth Hi-Tech Industrial Development Zone	Mr. Li Xing, Investment Promotion Bureau
Bureau of Commerce, Baotou	Mr. Chen Ping,Vice Director
Baotou Finance Office	Mr. Wang Li Ping
Shenhe Group, Linhe	Mr. Wang Zhiguang, President
Hengfeng Food Industry Co. Bayannao'er	Mr. Bai Yong Li, Manager
Jinchuan Beer Company, Bayannao'er	Mr. Geng, Manager
Bayannao'er Municipal Development and Reform Commission	Mr. Jia Jun, Deputy Director
Bayannao'er Finance Office	Mr. Fu Haibing, Director
Bayannao'er Municipal Merchants Bureau,Border Trade Office,Planning	Mr. Xiao Zhong Min, Section Chief Mr. Wu Hai Sheng, Vice Director
Wulate, IMAR Government	Mr. Du Zhan Gui, Head of Government Ren Yiqun, Vice Head
Swift Logistics, Baotou	Ms. Zhang, Supervisor
Yi Li Milk Factory, Baotou	
Tunhe Hetao Tomato Juice Co., Bayannaoer	
Jinquan Industrial Development Zone	Bayannaoer
Copper Factory	Bayannaoer
Zinc Factory	Bayannaoer
Bayannao'er Transportation Company	President
Bayannao'er Produce Center	