

**The Study for Broader Area
Transport Infrastructure
Development in Afghanistan and
the Surrounding Countries**

FINAL REPORT

March 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

**ORIENTAL CONSULTANTS CO., LTD.
EIGHT-JAPAN ENGINEERING CONSULTANTS INC.
INFRASTRUCTURE DEVELOPMENT INSTITUTE-JAPAN**

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PREFACE

Japan International Cooperation Agency (JICA) decided to conduct a Research on Cross-Border Transportation Infrastructure in the Region of Central Asia, South Asia and Middle East.

JICA held the research meetings and dispatched a study team headed by Mr. Shozo KAWASAKI of Oriental Consultants Co., LTD., between August 2009 and February 2010.

JICA and the team held discussions with Prof. Tsuneaki YOSHIDA of the Department of International Studies, Graduate School of Frontier Sciences of the University of Tokyo and Associate Prof. Hironori KATO of the Department of Civil Engineering, the University of Tokyo, as technical advisor through the research meetings and conducted field surveys at the study area. In response to the result of the discussions and the field survey, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the further development in the Region of Central Asia, South Asia and Middle East.

Finally, I wish to express my sincere appreciation to the officials concerned for their close cooperation extended to the study.

March 2010

Kiyofumi KONISHI,

Director General
Economic Infrastructure Department
Japan International Cooperation Agency

March 2010

Mr. Kiyofumi KONISHI
Director General
Economic Infrastructure Department
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

Dear Sir:

It is indeed our great pleasure to submit herewith the Final Report of “Cross Border Transport Infrastructure Study in Afghanistan and Neighboring Countries”, which has been implemented since September 2009.

The Study Team collected information and data on present conditions of cross border transport infrastructure including field visit in Afghanistan, Iran, Pakistan, India and the Asian Development Bank in Manila. This report compiles the present conditions and problems regarding the cross border transport infrastructure through the analysis of collected information and data and the various discussions with authorities concerned.

A harmonized development of cross border transport infrastructure is one of the key issues of the development not only for Afghanistan but also for Neighboring Countries.

Afghanistan is still facing social, economic and political challenges in the midst of efforts to unify the country and bring peace and stability to the Afghan people. We hope that the outcomes of the study will be able to contribute toward formulation of appropriate measures for further development of Afghanistan.

Lastly, we would like to express our sincere appreciation once again to all the parties concerned for your kind and effective cooperation for the successful implementation of the study, and truly hope for your continuous concern and support to the further development of Afghanistan as well as Neighboring Countries.

Very truly yours,

Shozo KAWASAKI
Team Leader
Cross Border Transport Infrastructure Study in
Afghanistan and Neighboring Countries

SUMMARY

1. Background of the Project Study

Although Islamic Republic of Afghanistan (hereafter Afghanistan) has been exerted itself for reconstruction and development being supported by international society, the progress of them is not satisfactory as international society expected. In recent years, the terrorist activity by antigovernment force including Taliban has also been activated, and the reconstruction is still on the hard way to be realized.

Afghanistan is a landlocked country surrounded by Iran, Pakistan, Kazakhstan, Uzbekistan, Tajikistan, Kirgiz, Turkmenistan, and China, and its relation with these countries is very close economically and historically. Therefore, the peace, stability, and economical prosperity of Afghanistan is very related with surrounding countries resulting unable to research as a regionally independent country but necessary as a mutually relied country with the Middle and Near East, Southwest Asia, and Central Asia regarding the very important issues like the activation of regional security and economy.

Since Afghanistan and neighboring countries have the vital issues that international society also recognizes, the necessity of wide-area support for these countries is discussed in recent years not only for the Afghanistan but also neighboring countries.

As an approach to the method of wide-area support, maintenance of the cross-border infrastructure beyond the boundary of the Afghanistan and neighboring countries may be shown, and promotion of social economic development of not only Afghanistan but the overall communities can be presented.

2. Purpose of the Project Study

In view of the present situation of Afghanistan and neighboring countries, the purpose of the study in this research, is to recognize the current condition of wide-area transport infrastructure development in this area, and to rearrange the issues to be concerned.

3. Objective Countries

Objective countries of this study are Afghanistan and neighboring countries; Iran, Pakistan, India, Kazakhstan, Uzbekistan, Tajikistan, Kyrgyz and Turkmenistan.

4. Summary of Site Visit

The dispatched schedule of the Study Team and the visited counterparts are as shown below.

Research Country	Research Period	Counterpart
Iran	2009/10/10—2009/10/13	Ministry of Foreign Affairs, Ministry of Economic Affairs and Finance, Road & Transportation Bureau, etc.
Pakistan	2009/10/19—2009/10/23	Economic Affairs Division, Ministry of Railways, Ministry of Communications, Karachi Port Trust, Custom Office, etc.
Afghanistan	2009/12/13—2009/12/16	Ministry of Commerce and Industries, Ministry of Finance, Ministry of Public Works, ADB, UNDP, WB, etc.
India	2009/12/17	Ministry of Shipping, Road, Transport & Highways (National Institute for Training of Highway Engineers)
Philippines(ADB)	2009/10/15	Transport and Communications Division (South Asia, Central & West Asia Departm)

5. Contents of the Research

5.1 Summary of Research

The stability of not only Afghanistan but also the surrounding countries is indispensable to building peace in Afghanistan and the surrounding area. The broader area transportation infrastructure would revitalize the movement of people and goods in the area, promote free trade and investment, and help to create industries by linking the development potential of the countries. It would help realize sustainable economic development. This, in turn, would greatly contribute to stabilization, mutual understanding, trust, and poverty reduction. This is why the importance of broad area transportation infrastructure has been recognized in recent years.

On the other hand, simply developing broad area transportation infrastructure could have a negative as well as a positive effect if only structural aspects of transportation are built. Non-structural improvements such as development of software systems are needed, and many issues remain to be solved.

This paper outlines a vision for the future and examines issues involved in building a wide area infrastructure network that would contribute to sustainable development of regional economies and promote peace and stability in Afghanistan and the countries surrounding it.

5.2 Objective of Research

Purpose: Study of a future image of a wide area transportation network

Approach: Construction of broad transportation infrastructure;

(i) Swift, smooth and safe cross-border traffic

(ii) Economic development in areas served

(iii) Integration of facilities, management, systems and procedures

5.3 Scenario of Regional Economic Development on the Wide Area Transportation Infrastructure Development

- Current Condition:

The growth of trade is limited and the potential of development is lowered because the regional trade is closed and the channel of trade is limited due to the bad security condition in Afghanistan.

- Rearrangement:

When the economic and industrial characteristic features are rearranged, the main industry of this region is agriculture and the CIS countries are blessed with mineral resource. Meanwhile, Iran, Turkmenistan, Kazakhstan, Uzbekistan have rich reservoirs of oil and natural gas.

- Grasp:

After grasping of development potential and effectiveness of development, it would be understandable that there is possibility of benefit to Afghanistan by physical distribution system via Afghanistan. At the same time, Afghanistan has a chance to change from agricultural producing country to consumer country based on active cross-border trade and development of resource processing industries.

- Development:

The development of corridors in Afghanistan and neighbouring countries will impact to the flow of people and products. The development of routes through CIS nations to Arabian coastal cities will accelerate regional trade. The development of corridors from Iran to India-Pakistan direction will build new material flow and activate a local industry.

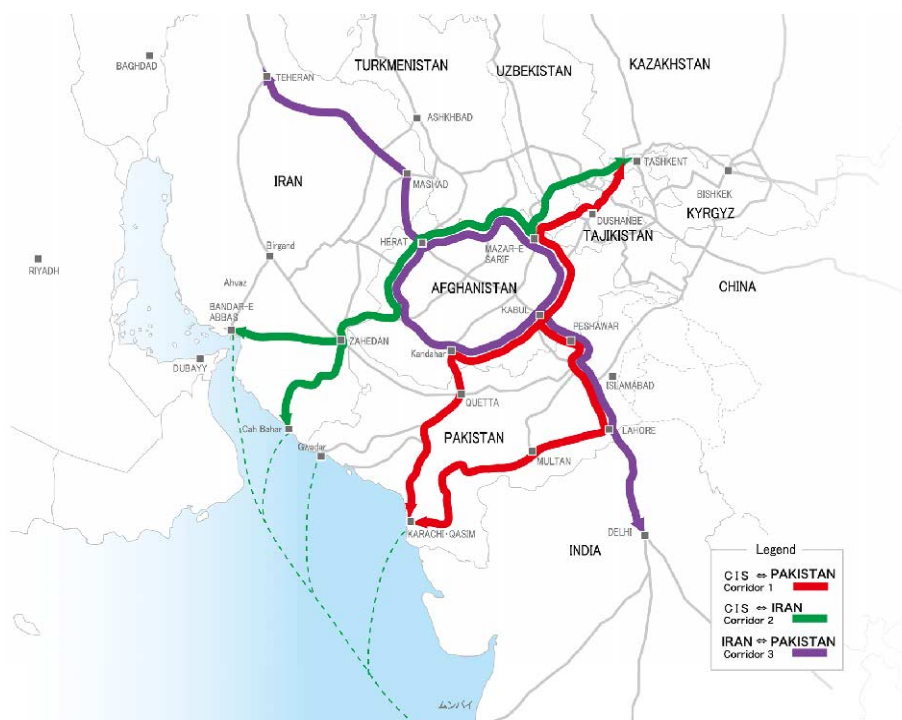
6. Purpose and Necessity of Developing an Afghan Transit Network

The proposed transit network will promote revitalization of economic and industrial activity in Afghanistan and the countries surrounding it by building corridors for swift and smooth movement of people and goods to reduce logistics costs and expand the scope of movement. The transit network will help provide an environment conducive to exploiting the potential for growth in the entire region. It will facilitate development of the energy and mineral resources in the region, development of resource-processing industries, tourism and trade, and agriculture. An Afghan transit network will contribute to cultural exchange, rectifying regional imbalances, accelerating international humanitarian assistance that has been continuously extended, and to building peace through poverty reduction and restoring public safety.

7. Future of Afghan Transit Network

7.1 Corridor 1 (Kyrgyz, Tajikistan, Afghanistan, Pakistan)

The corridor starts from Uzbekistan (Capital: Tashkent) and Tajikistan (Capital: Dushanbe), runs through Afghanistan and connects to Karachi/Qasim Port in Pakistan. By networking CIS countries depending on monoculture economy after becoming independent from the Former Soviet Union and the two populous countries of Pakistan and India, it is expected that new industries, such as resource processing industries, will be created along the corridor. Afghanistan could function as a transit hub. This would also stimulate development of domestic industries and provide opportunities for economic growth through exports of domestic products.



7.2 Corridor 2 (Turkmenistan, Uzbekistan, Afghanistan and Iran)

This corridor can be either a road or railway starting from Uzbekistan (capital: Tashkent), passing through Turkmenistan and Afghanistan and arriving at Bandar Abbas Port and Chabahar Port. For inland countries that depend heavily on a supply of energy and resources from Russia and other CIS countries, diversification of trading partners and sources of energy can be achieved through development of a corridor connecting Iran and international ports such as Bandar Abbas and Chabahar. This would contribute to sustainable economic development in these countries.

7.3 Corridor3 (Iran, Afghanistan and Pakistan)

This Corridor starts in Iran (capital: Tehran), runs through Afghanistan and connects with Pakistan and India. Sea transportation is mainly used in the trade between Iran and India. Building a land network connecting these countries will realize smooth trade of high value-added products and medicines. Development of the shortest corridor connecting Iran, Pakistan and India will streamline logistics in the area. Industrial development is expected also in Afghanistan which is along the route.

8. Focus on domestic traffic network in Afghanistan

The development of access route from local road to trunk road is important for expansion of Afghanistan domestic industry.

9. Trend of Transcontinental Corridor (Potential for development of land bridge of South China and India)

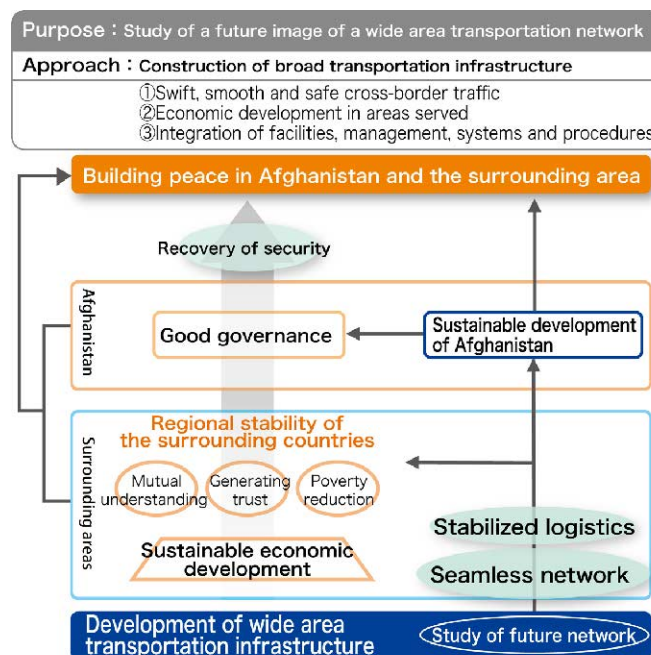
The Siberian Land Bridge (SLB) had been established as alternative route to marine transportation in Eurasia continent in 1970'. However, the transportation volume of the SLB was decreased in confusing period during break up of the Soviet Union. That volume had recovered temporarily but it has decreased by the rise of China Land Bridge (CLB). Recently, the decreasing tendency is still continuing.



Existing → Rise of CLB → Future

The China Land Bridge (CLB) appeared in the 1990s. The CLB leads to Europe from Jiangsu Province in China via Kazakhstan or Kirghiz. The trend of cargo volume in CLB is on the increase because of the merit of short distance for conveyance on marine route to Europe and the affection of Chinese economic development.

The route from South China, southern side of the CLB, and India via Afghanistan to Western Europe will bring about increase in cargo volume from the radical rise of China and India. The area along with these routes that is centred on Afghanistan is qualified as a highly developed potential area in view of perspective of economic effect by active port usage in Iran and Pakistan. But there is only a small chance for effective utilization of development potential unless peace building comes true in Afghanistan and neighboring countries. The priority of regional economic development and peace building with poverty reduction is very high and immediate needed. The methodology to realize this peace building is shown as below;



Purpose: Economic development in cooperation with neighboring countries

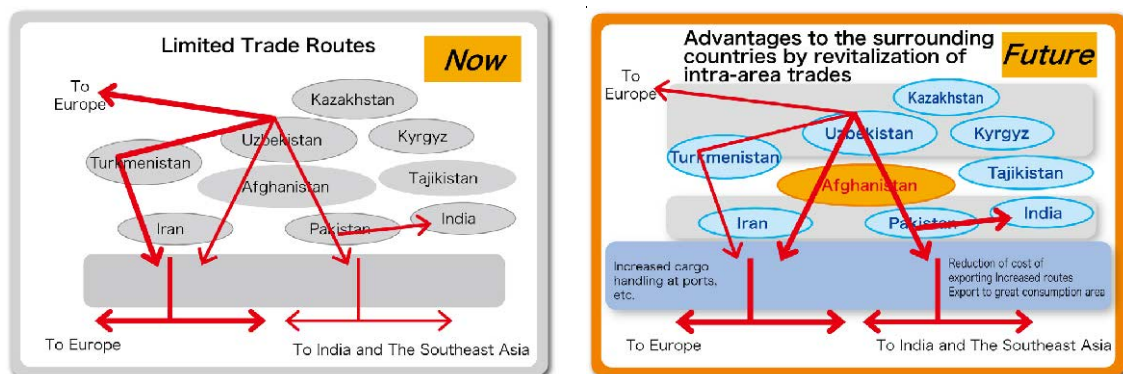
Project: Wide area transportation infrastructure development

1. To the realization of the prompt and smooth and safe transportation
2. To the promotion of economic growth in the via countries and region
3. To the integration of the facilities and the operation and the system and the procedures

10. Scenario for regional economic development spurred by construction of regional transportation infrastructure

10.1 Current situation in the subject area

The area includes many countries that are primarily agricultural as well as countries with great potential for developing energy resources such as petroleum and natural gas. In addition, India and Pakistan have large labor forces and their consumer needs are extensive. The region has natural resources and the potential of developing industries for processing raw materials is great. Thus the area has huge potential for economic development.



Existing → Development of Wider Transport Infrastructure → Future

10.2 Necessity of Developing Afghan Transit Network

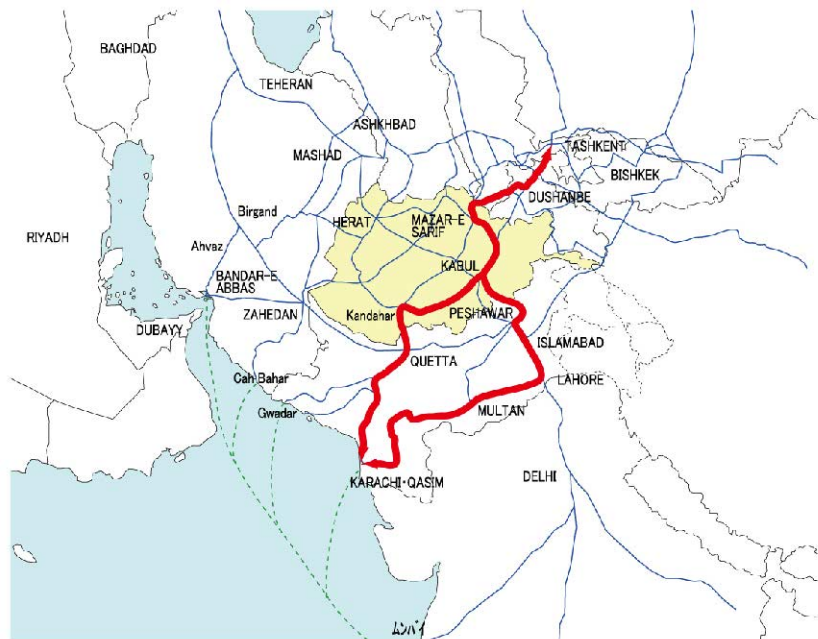
To exploit the development potential, it is important to create new economic activities by developing and enriching the logistics network in the area, and revitalizing the flow of people and goods. Development of “Afghan Transit” passing through Afghanistan would trigger revitalization of trade in the entire area through development of resources and industries, involving the neighboring countries. Diversification of trade partnerships in the landlocked countries would result in sustainable development of the related countries.

As mentioned above, an “Afghan Transit Network,” a logistics network connecting Afghanistan with the surrounding countries, would promote sustainable development in the region. These developments would be very significant.

11. Future Image of Transit Network in and around Afghanistan

Corridor 1: Issues in creating the corridor

- The Karachi/Quetta route is mainly low-cost pavement. If security is improved, there will be a need for road rehabilitation (West Route).
- Road construction in some sections is proceeding (in the Peshawar/Wakhan Corridor). Road maintenance is a serious issue because the route passes through steep mountains (need alternative routes).
- Development of regular road rehabilitation and maintenance capabilities (especially in Afghanistan and Tajikistan).
- Development of road-related facilities along the route (refueling, vehicle repair and tune-up services, rest facilities, especially in Afghanistan)

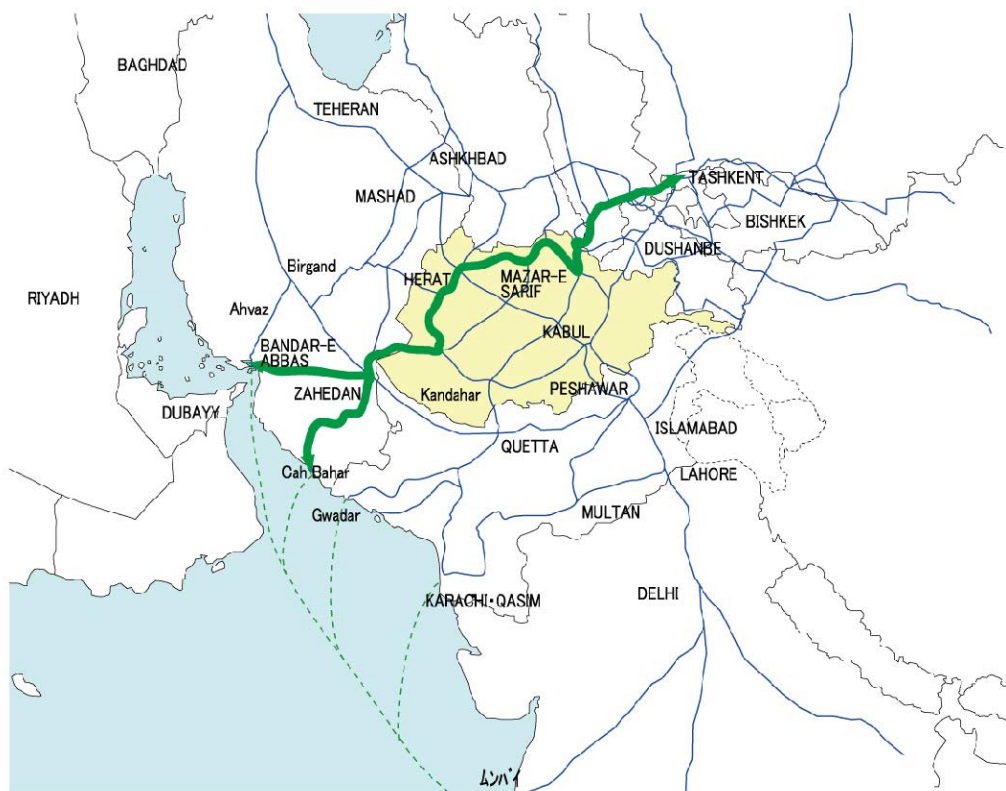


Corridor 1: Kyrgyz, Tajikistan, Afghanistan and Pakistan

Country	Issues	Potential	Regional economic effect
Kyrgyz Tajikistan	Narrow domestic market; dependent on imports of raw materials for processing; depends on primary product trade, monoculture economy	Rare mineral resources, potential for agri-business; hydropower generation utilizing abundant water resources;	Development of exports to great consumption areas of China and India; growth achieved by stimulating logistics and value-added trade
Afghanistan	Domestic security, trade deficit; depends on assistance, need for improvement of governance, poverty reduction; relatively large informal sector, weak manufacturing	Develop extraction business, export of agricultural products; provide transit functions for regional trade	Growth as a trading country providing transit-hub functions; by export of Afghan products, opening up closed areas to the world; facilitate flow of people and information
Pakistan	Need for balanced development of domestic economy; effective utilization and expansion of Karachi/Qasim and Gwadar ports; need to end conflicts with India	Creation of industry taking advantage of high concentration of human resources; fuller utilization of ports (Karachi, Qasim and Gwadar); expansion, stimulation of trade with the Central Asia	Growth by expanded markets (for cotton products and wheat); advantageous procurement of cheap consumer products and intermediate inputs; contribution to development of areas to the north

Corridor 2: Issues in creating the corridor

- Road rehabilitation is not completed in the northwest section of the ring road in Afghanistan (Herat-Andkhvoy) due to remaining security issues.
- The railroad is developed only at a section of the border of Hairatan in Afghanistan. The task is to establish construction, management and maintenance organization along the route and human resources development.
- Road rehabilitation between Dilaram and Zaranji.
- Improvement of road maintenance capacity particularly in Afghanistan.

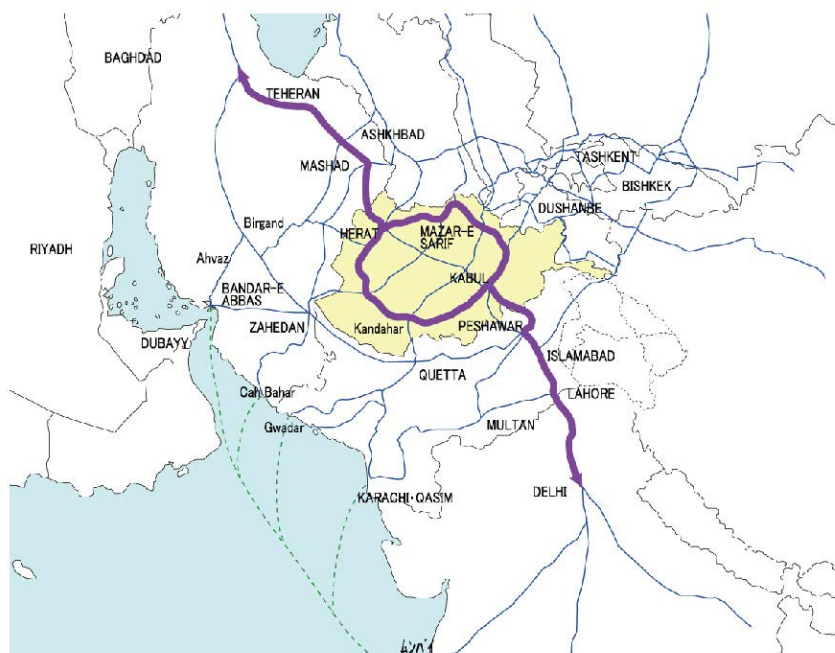


Corridor 2: Turkmenistan, Uzbekistan, Afghanistan and Iran

Country	Issues	Potential	Regional economic effects
Uzbekistan	Need to diversify trade partners; need for industrialization utilizing abundant natural resources (metals, cotton); need to overcome transportation disadvantages as a land-locked country	Abundant mineral resources and production of natural gas; should enable acquisition of foreign currency by diversification of resource export market.	Procurement of capital goods required for modernization of industry; route for conveying overseas technology; improve competitiveness by reducing long-distance transportation costs for exports to South Asia and other parts of the world
Afghanistan	Domestic security, trade deficit; dependence on assistance; need to improve governance; relatively large informal sector, weak manufacturing	Develop extraction business, export of agricultural products; provide transit functions for regional trade	Growth as a trading country with transit-hub functions; Development from export of Afghan products; Open up a closed area to the world (facilitate flow of people and information)
Turkmenistan	Dependence on trade in primary products and monoculture economy. Need to move away from closed and controlled economy	Develop chemical complex, plant industries, and material industries; natural gas development; exploit demand for infrastructure construction	Coordination of transportation between Caspian Sea Route and Afghan Transit
Iran	Need to move away from closed and controlled economy; need to develop economy of underdeveloped Baluchistan area	Abundant petroleum and natural gas. Diversification of industry into cars and home electric products; Develop infrastructure network with eight countries on border and for economic development inside the country	Economic growth in Baluchistan area by developing Chabahar Port and inland area, resolution of narcotics and refugee issues; exert leadership within the ECO area

Corridor 3: Issues in creating the corridor

- Road rehabilitation is not completed in the northwest section of the ring road in Afghanistan (Herat-Andkhvoy) due to remaining security issues.
- The railroad is developed only at a section of the border of Herat in Afghanistan. The task is to build railways along the route; to do this, management and maintenance organization must be established and human resources must be developed.
- Road maintenance (including disaster-prevention) at Khyber Pass, and alignments in railway construction plan
- Road improvement in Baluchistan area (road is underdeveloped due to bad security situations)

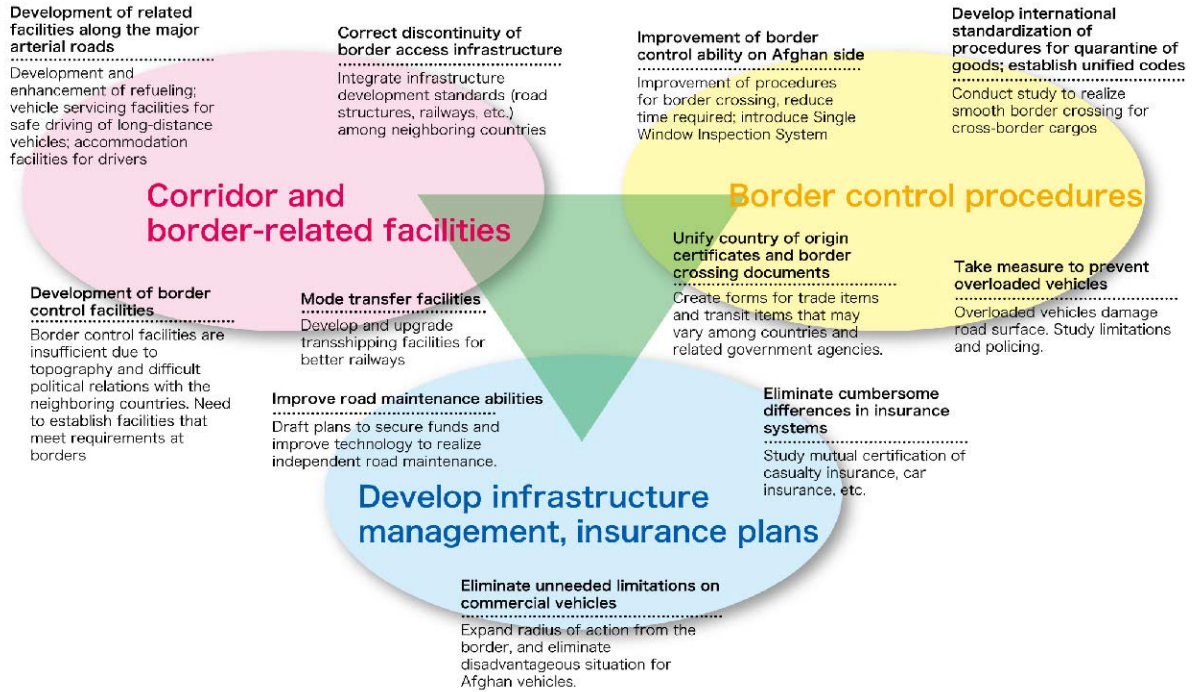


Corridor 3: Iran, Afghanistan and Pakistan

Country	Issues	Potential	Regional economic effects
Iran	Need to move away from closed, controlled economy; need for economic development of underdeveloped Baluchistan Area	Abundant energy (petroleum, gas, etc.); should be able to diversify industry to produce autos and home electric products	Promotion of business at Chabahar port and in interior for business growth in Baluchistan; resolution of refugee issues Export of energy and high-value-added products to major markets
Afghanistan	Domestic security, trade deficit; dependence on assistance, need for improved governance, poverty reduction; informal sector is too large; weak manufacturing	Extraction industry and export of agricultural products; provision of transit functions for regional trade	Growth as a trading country serving as transit hub; development by exporting Afghan products Opening of closed area; enhanced flows of people and information
Pakistan	Need for balanced development of the country; need for more effective use of Karachi, Qasim and Gwadar ports; need to reduce tension with India	Increase added value of products through intra-regional trade; effective use of Karachi, Gwadar ports	More effective division of labor in light industry; growth of market for cotton products and wheat; Easier procurement of capital goods and materials for heavy industry; Stabilization by promoting the economy of Baluchistan
India	Need to reduce tension with Pakistan; shortage of infrastructure for electric power generation, ports, railways and roads; majority of citizens are poor.	With population of 1.1 billion; economic growth can be driven by domestic demand.	Energy and energy-related products can be more easily obtained; growth in export of high-value-added manufactured goods and medicines; lower costs in procuring materials required for national development

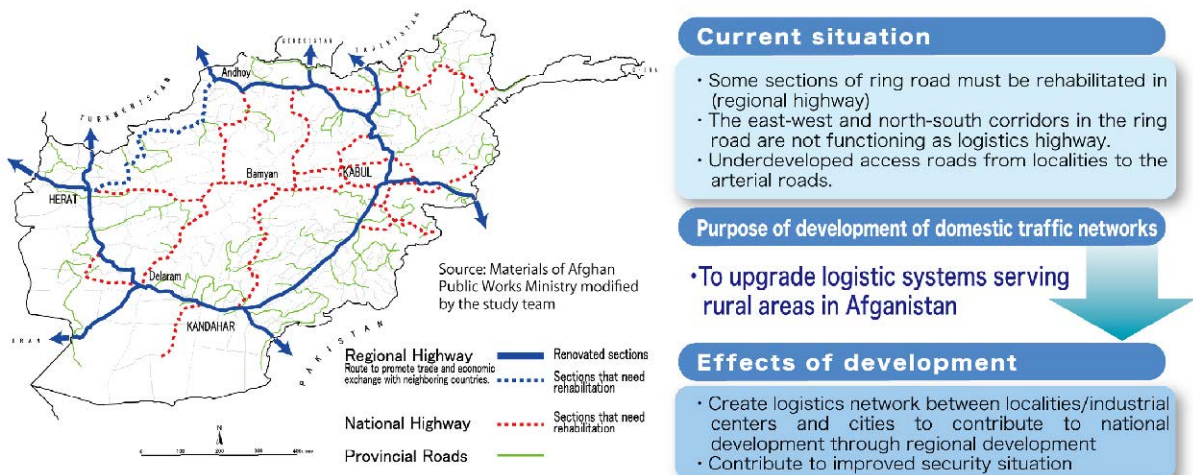
12. Common tasks in developing Afghan Transit

Common tasks in developing Afghan Transit :



13. For development of Afghanistan by the broad area traffic infrastructure

- Focus on Domestic Traffic Network in Afghanistan



To achieve sustainable economic development in Afghanistan, it is necessary to revitalize domestic industries. To transport agricultural products and materials produced in various localities to domestic and foreign consuming regions, it is necessary to develop access routes connecting regional roads with major arterial roads (regional/national highway levels).

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Abbreviations

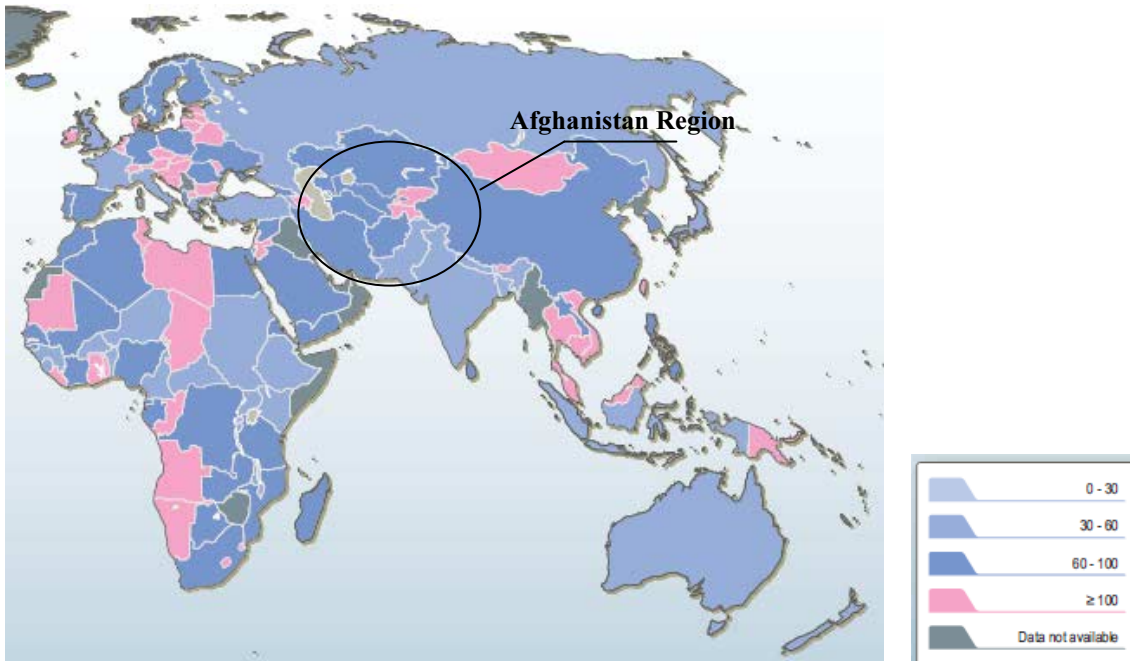
AADT	Annual Average Daily Traffic
ADB	Asian Development Bank
AH	Asian Highway
ANDS	Afghanistan National Development Strategy
ANSF	Afghanistan National Security Forces
ARCS	Afghanistan Road Condition Survey
BOT	Build, Operate and Transfer
CAREC	Central Asia Regional Economic Cooperation
CIS	Commonwealth of Independent States
CLB	China Land Bridge
DBST	Double Bituminous Surface Treatment
ECO	Economic Cooperation Organization
EU	European Union
FS	Feasibility Study
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GMS	Greater Mekong Sub-region
ICD	Inland Container Depot
IMF	International Monetary Fund
ISAF	International Security Assistance Force
ITC	International Trade Commission
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
MOU	Minutes of Understanding
MPW	Ministry of Public Works
MRRD	Ministry of Rehabilitation and Rural Development
NGO	Non Government Organization
NHA	National Highway Authority
NWFP	North-West Frontier Province
OECD	Organization for Economic Cooperation and Development
OECF	Overseas Economic Cooperation Fund
ODA	Official Development Assistance
OEF	Operation Enduring Freedom
OJT	On the Job Training

OPEC	Organization of the Petroleum Exporting Countries
PPP	Public Private Partnership
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area
SCO	Shanghai Cooperation Organization
SLB	Siberia Land Bridge
TEU	Twenty-foot Equivalent Unit
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
WTO	World Trade Organization

Chapter 1 Needs of Broader Area Transport Infrastructure Development in Afghanistan and Its Surrounding Countries

1.1 Background

Figure 1.1 is a map showing import & export / GDP (trade volume divided by GDP), except for Pakistan. The ratio of “trade / GDP” for Afghanistan and its neighboring countries is more than 50% higher than for Japan because Afghanistan is supported by international assistance. Iran is an exporter of natural resources, and the Central Asian countries formed a role-sharing system in one country once belonging to the former Soviet Union. Significantly, the ratios in Kyrgyz and Tajikistan are more than 100%. Because of the high extent of dependence on foreign trade in Afghanistan and its surrounding countries, these countries will receive much effect and benefit if the transport network is improved.



Source: WTO; International Trade Statistics 2009

Figure 1.1 Ratio of Export/Import in Goods and Services over GDP (GDP, 2007)

The broader area corridor extending across the Eurasian Continent, and connecting East Asia and Europe, is separated into the Siberian Land Bridge and the China Land Bridge for the land routes, and the southern sea route to Europe via Japan, Korea, Singapore and Suez Canal.

The Siberian Land Bridge (SLB) came to be used officially in the 1970s and was highlighted as an alternative route to the southern marine transportation. But later, use frequency decreased because of confusion resulting from the former Soviet Union’s collapse. It recovered one time but recently it tends to decrease because of drastic growth of traffic efficiency in maritime transport and the rise of CLB.

CLB appeared in the 1990s. It extends from Chiang-Su in China to Europe through Kazakhstan and Kyrgyz. Its freight volume handled tends to increase because the route to west Europe is drastically shorter than the distance of the maritime trade; also it is affected by Chinese economic development. The China Land Bridge, the former Silk Road, is a network for long-distance traffic connecting Asia and Europe, which connects the principle cities of 5 million population through Afghanistan.

The southern sea route is called the maritime Silk Road and is a maritime trade route connecting East Asia and Europe which extends to the Mediterranean Sea via South China, the South China Sea, Indian Ocean and Red Sea.

Figure 1.2 shows a broad area network of roads and railways across the Eurasian Continent. In the figure, route group 1 (purple) is the SLB and route group 5 (blue) is the CLB.

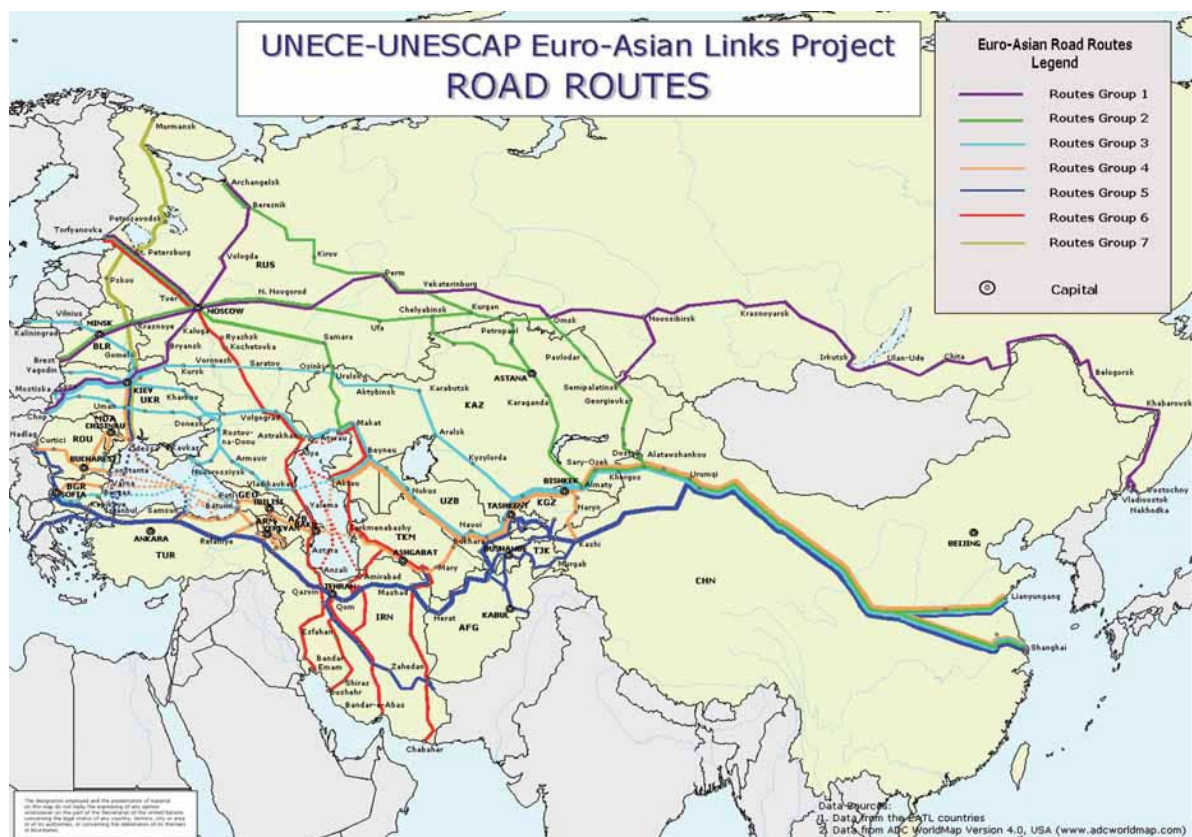
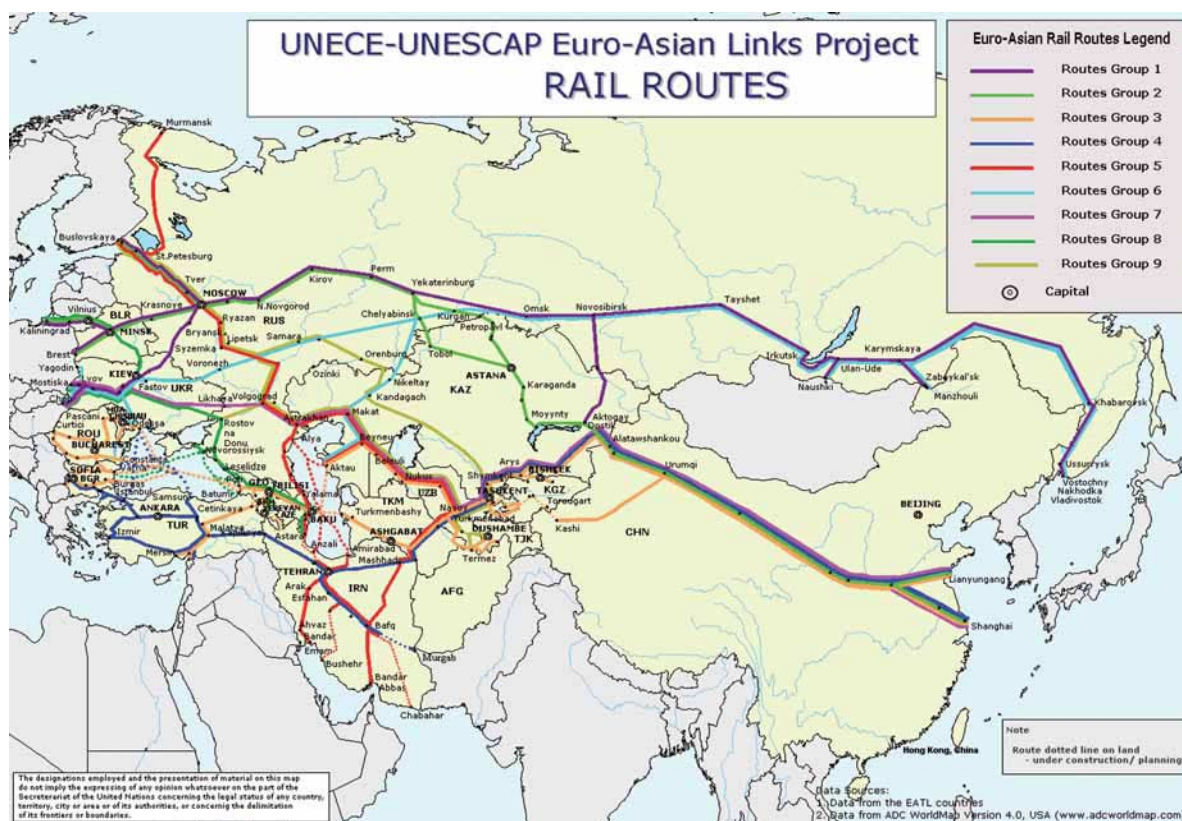


Figure 1.2 Transcontinental Broad Area Network (1)

CLB branches off south and north at the capital of Hsin-Chiang Uighur, Urumqi. The North route, called Tian-Shan north course in the era of Silk Road, extends to Kazakhstan crossing the Chinese border. Furthermore, CLB north course branches off south and north at the point of entrance to Kazakhstan, and extends toward the north to join SLB via Novosibirsk in Russia and/or Astana, the capital of Kazakhstan.

Meanwhile, the south route goes toward Almaty in Kazakhstan, Bishkek in Kyrgyz, and Tashkent, the capital of Uzbekistan and the largest city of Central Asia, and to Istanbul in Turkey via Afghanistan, Turkmenistan and Iran. In addition to the south route, there is a route toward Moscow from Tashkent lying north of the Caspian Sea.

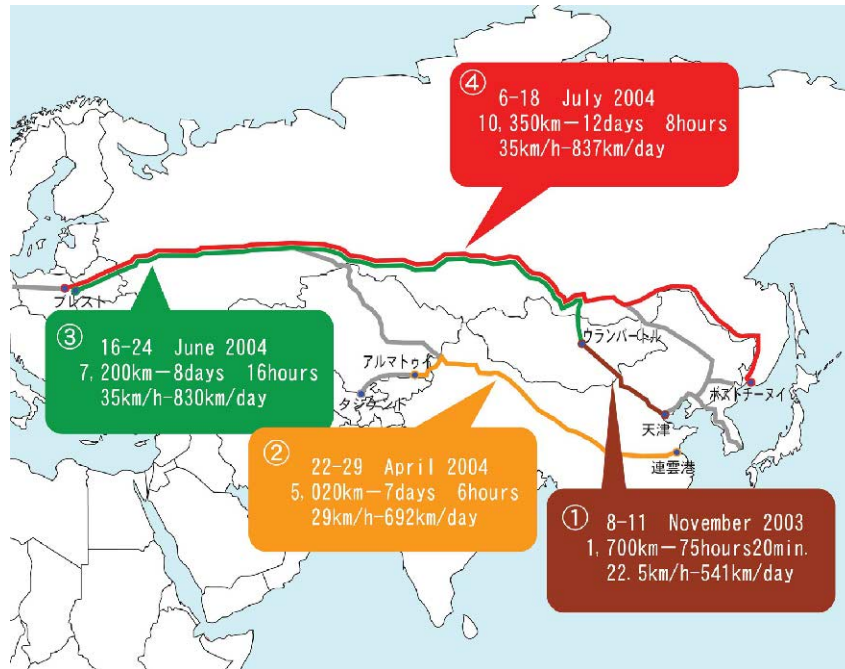
On the other hand, the south route called Tian-Shan south course in the era of Silk Road, which branches off to south at Urumqi, is a route toward Kaxgar, a border city in China and from Kazgar it enters Pakistan and extends to Rawalpindi and Karachi/Qasim via Karakoram Highway.



Source: JOINT STUDY ON DEVELOPING EURO-ASIA TRANSPORT LINKAGES

Figure 1.2 Transcontinental Broad Area Network (2)

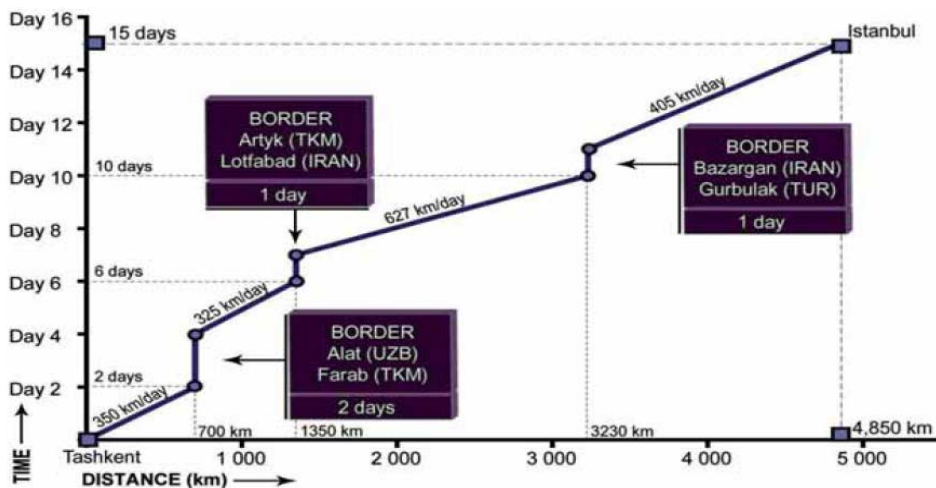
Figure 1.3 shows a figure which compares days for the railroad transportation in the Siberian Land Bridge and the China Land Bridge. It takes 12 days and 8 hours across 10,350km from Vostchny Port, an origin of the Siberian Land Bridge, to Brest which is a border point between Belarus and Poland, an entrance to Europe. And it takes 7 days and 6 hours across 5,020km from Lian-Yun-Gang which is located on the border between Shandong and Chiang-Su in China, an origin of the China Land Bridge, to Almaty which is a border city with Kyrgyz in south-eastern Kazakhstan. Although the distance from Almaty to Tashkent is only about 800km, it takes several days for transportation because of border crossing.



Source: JOINT STUDY ON DEVELOPING EURO-ASIA TRANSPORT LINKAGES

Figure 1.3 Siberian Land Bridge and China Land Bridge

Figure 1.4 shows time-distance for road transport from Tashkent to Istanbul. It needs totally 14 days, 10 days for transport and 4 days for border crossings, it runs about 1,300km from Tashkent to Ashgabat, the capital of Turkmenistan near the border between Iran and Turkmenistan, and then about 5,000km to Istanbul via Artyk on the border between Turkmenistan and Iran.



Source: JOINT STUDY ON DEVELOPING EURO-ASIA TRANSPORT LINKAGES

Figure 1.4 Time-Distance for Road Transport from Tashkent to Istanbul

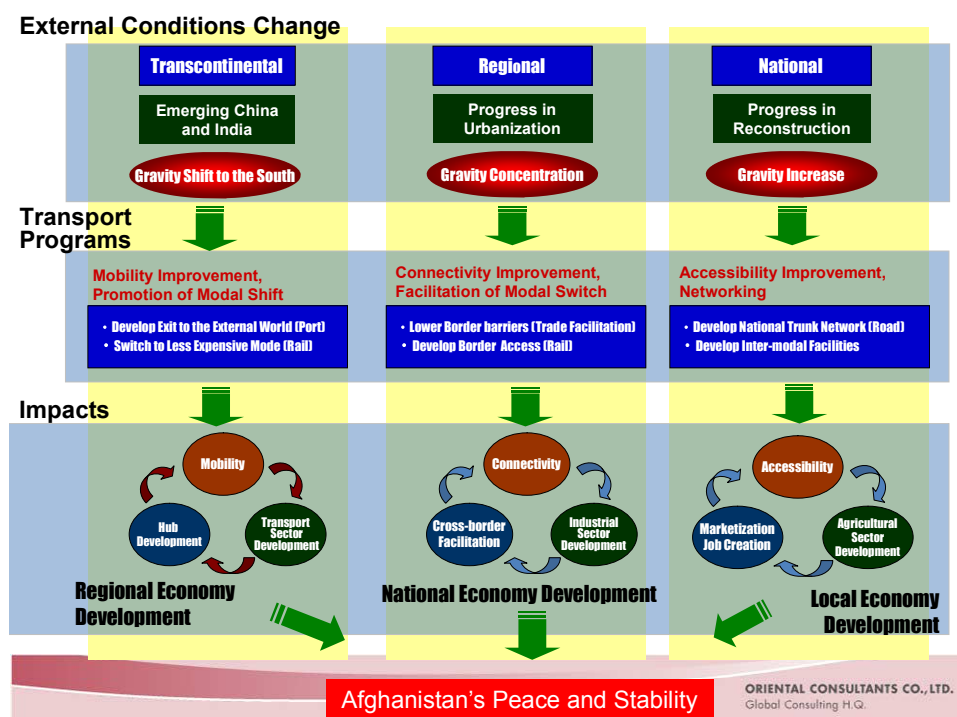
Also, the distance of Afghan transit from Tashkent to Bandar Abbas port in Iran or Karachi port in Pakistan via Afghanistan is 2,700km, and it takes about 2 weeks by the former route and 7-9 days by the latter¹. It takes 2 weeks for transit time, because it takes 10 days for transport from Karachi to Kabul and 3-5 days for border crossing of Pakistan ~Afghanistan.

In case of transport for Europe, it is necessary to transport within 1 week ~ 10 days from Almaty to Istanbul in order for the China Land Bridge to become competitive with the Siberian Land Bridge.

1-2 Needs of Broader Area Transport Infrastructure Development

1.2.1 Summary

Figure 1.5 shows transport measures and their impact for corresponding environmental change on the background of transport measures, and for realizing peace/stability in Afghanistan by dividing broad area transport into three, transcontinental transit, regional transit and national transit, based on their different features.



Source: JICA Study Team

Figure 1.5 Needs of Broad Area Transport Infrastructure Development (1)

¹ Transit time of 2 weeks is about the same as the 15 days which it takes to transport from Tashkent to Europe.

		Feature
Regional	Trans Continental	<ul style="list-style-type: none"> • A network of cities with more than 5 million population, form a part of global logistics network • Access to two principle ports (Karachi/Qasim and Bandar-Abbas) • Traffic is decreasing, mainly for formal trade, traffic is small comparing to regional potential. • Large transit traffic and beneficiaries in Afghanistan is the transport sector • Sensitive to transport cost, greatly influenced by security condition • Intermodal transport, international transport complex and port enhancement are focal points under the current situation. • Emerging India and China shifts gravity center to CLB. • Through the development of roads, the transport mode is progressing, railway development is a future task.
	Surrounding	<ul style="list-style-type: none"> • A network of cities with around 500 thousand population for Afghanistan's intra-regional trade with neighboring countries (Turkmenistan, Uzbekistan, Tajikistan, Iran and Pakistan) transiting Afghanistan • Traffic is increasing, informal trade plays an important role (especially in Afghan-Pakistan trade). According to official statistics, the region is engaged in trade but the real picture is not certain. • Bilateral trade of essentials is not much influenced by the security condition • Road transport plays an important role currently, smooth border crossing and intermodalization are focal points • Advancement of urbanization concentrates gravity to major urban areas. • Development of the road mode is almost completed, railway development of international access is a future task. • Beneficiaries in Afghanistan are mainly in the industrial sector.
National		<ul style="list-style-type: none"> • Indispensable roads for solution for Afghan's domestic problem (security, marketization and formalization) • Lacking in minimum road networks • Widely benefits to localities including agriculture, job creation

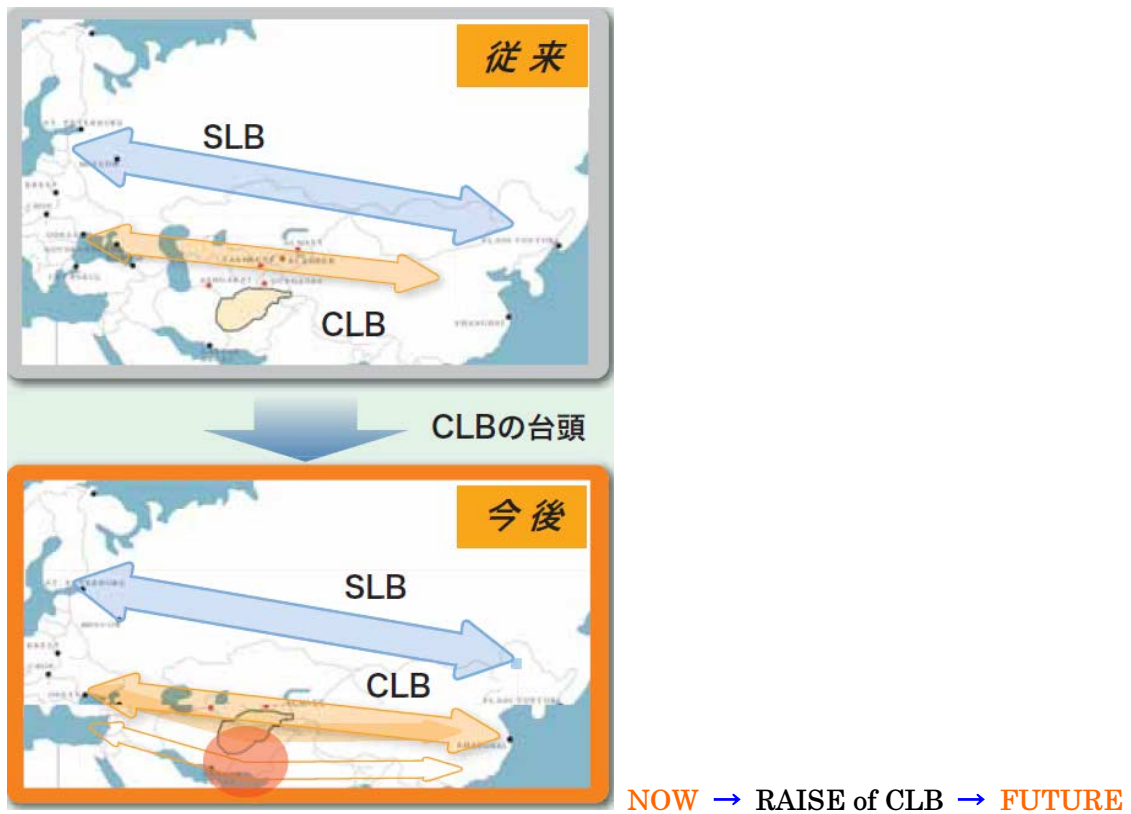
Source: JICA Study Team

Figure 1.5 Needs of Broad Area Transport Infrastructure Development (2)

1.2.2 Needs of Broad Area Transport Infrastructure Development in Continental Transits

Because of the recent dramatic rise of China and India, the cargo through a route from India and toward west Europe via the surrounding regions of Afghanistan, in the southern side of CLB or Southern China, could increase in the future. Considering the utilization of ports in Iran and Pakistan, the regions around Afghanistan are identified as having great potential for development. However, due to the current security situation in the regions, the possibility to utilize the potential of development, effectively, is low unless peace building in the regions is successful. Therefore, the peace building through economic development and poverty reduction is required in Afghanistan and its surrounding counties.

At the level of continental transit, the gravity of population and economy is shifting to the south due to the rise of India and China. The main factor to decide traffic flow at this level is the scale of bases than the distance between bases, and as a base, a port to access the outside world is important. In the relation of transport units and costs, for example, a panamax unit of 4,000 TEU is twice as expensive as a super-panamax unit of 10 thousand TEU. Regional logistics have possibilities to change drastically by strengthening the 2 main ports, Karachi / Qasim and Bandar Abbas, and also the developing ports, Gwadar and Chahbahar.



Source: JICA Study Team

Figure 1.6 Flow of the Continental Transit Corridor

At the continental transit level, the railroad mode is also important. The railroad mode is a low cost mode suitable for long-distance mass transportation of more than 500km, and is a mode that transports freight landed in ports and/or freights headed toward ports over a long distance. The distance from the four regional ports to principal cities of the Central Asia, the landlocked countries, is about 2,000~3,000km, then long-distance transportation by railroad is suitable.

On the other hand, railroad mode is not functioning particularly well over the Pakistan route. It is a necessary issue to improve the railways for effective logistics not only in Pakistan but also in all the regions.

1.2.3 Needs of Broader Area Transport Infrastructure Development in Afghanistan and its Surrounding Regions

In Afghanistan and its surrounding regions, trade and transport suitable for regional potential have not yet been realized. The reasons are not only the instability in Afghanistan but also inefficient administrative procedures and the huge amount of time taken for border procedures.

In the data of World Development Report 2009 by the World Bank, all 5 countries, Afghanistan and the 3 countries of the former CIS + Kyrgyz are ranked in the worst 10 regarding border procedures.

In this connection, the longest required time for export border procedures is Iraq and for import border procedures it is Uzbekistan, which are worse performances than Sub Sahara areas.

On the other hand, Afghanistan and its surrounding regions have great potential for internal trade, because India and Pakistan have large populations and are willing to build their countries. Afghanistan is expected to have great need for urban infrastructure facility construction, and Central Asian countries produce abundant mineral resources. Meanwhile, Afghanistan and its surrounding regions require infrastructure development of both hardware and software for a smooth mode switch such as efficient border procedures and/or construction of railways for border access. It can be said that effective transit will not be realized without making borders seamless because of the huge costs for border crossing procedures and for a mode switch in Afghan transit at present. However, it also can be said that the huge gap between actual and ideal conditions shows the potential for improvement.

1.2.4 Needs of Domestic Transport Infrastructure Development in Afghanistan

The road mode is important at this level, in particular, development of regional roads. Because population in Afghanistan is dispersed, much time and money are necessary to carry fruits, which are grown in rural areas, to ring roads. Therefore, people live on self-sufficient production in Afghan rural areas because commercialization of crops in the markets in rural areas is not sufficiently developed. To bring the rural production power into the market, networking of villages is required; therefore, road development for access from farms to market is required.

The World Bank and UNDP have worked on networking in isolated farm villages and improving access to schools, hospitals and market, but villages in Afghanistan will open up more to the region and the world by connecting to domestic trunk roads and/or future intermodal facilities. This would have a positive impact for development of regional roads and for employment, and will lead to stability of the community society. If the regions are not stabilized, value of Afghan Transit will not increase, and insurance cost will become a big factor in the high transit cost. At the regional level, it is required to aim for improving safety by stabilization of the rural economy and improvement of transit value.