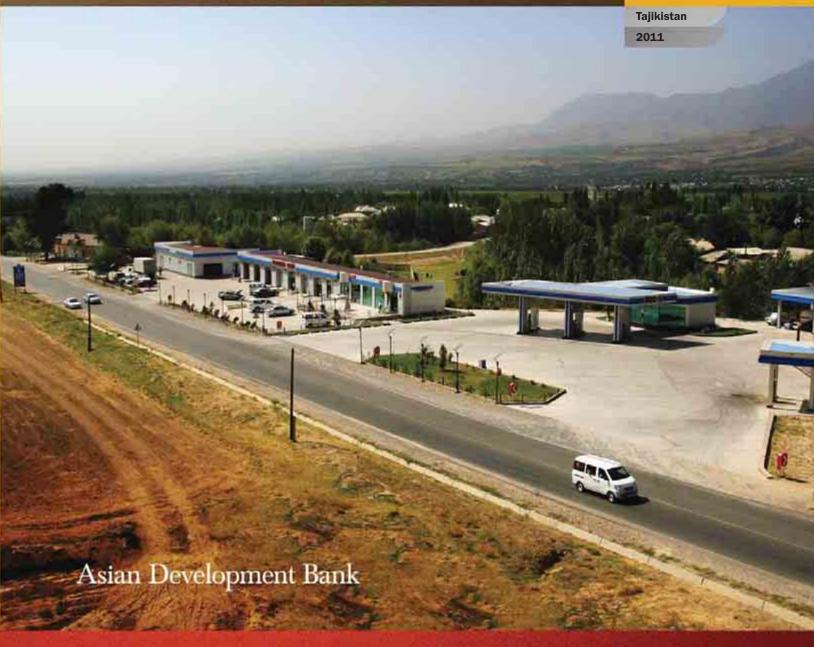


Developing Tajikistan's Transport Sector

Transport Sector Master Plan

TRANSPORT AND COMMUNICATIONS



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Developing Tajikistan's Transport Sector

Transport Sector Master Plan

TRANSPORT AND COMMUNICATIONS Tajikistan 2011

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ABBREVIATIONS

PRC

ADB Asian Development Bank CAREC Central Asia Regional Economic GDP gross domestic product IRI international roughness index MOTC Ministry of Transport and Communications MTEF Medium-Term Expenditure Framework PPP public-private partnership

People's Republic of China



Transport policy is a powerful instrument that can shape a country's physical development, including its residential, industrial, and economic landscapes. A good transport policy lays out the groundwork for sustainable sector growth.

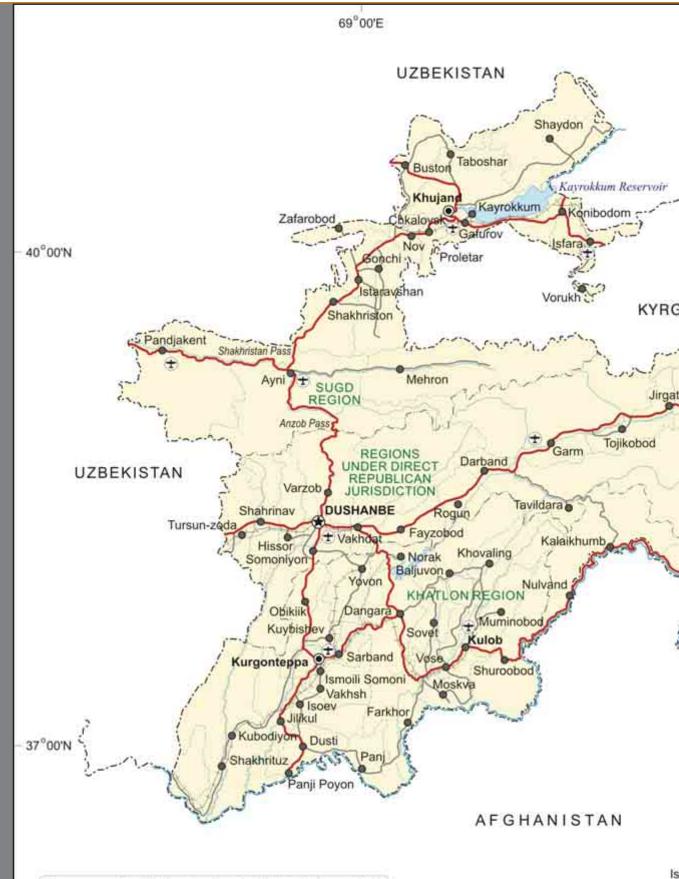
Preface

As a small landlocked country, Tajikistan depends on external trade for its development, and its export-driven businesses in agriculture and industry require transport that is fast, reliable, and cheap. Although Tajikistan is strategically located in Central Asia, allowing the country to serve as an important transit route for commercial traffic among the People's Republic China, the Russian Federation, South Asia, and the Middle East, its gaps in transport infrastructure and human resource skills hinder trade. Therefore, these gaps need to be eliminated.

Tajikistan's economic performance has been impressive in recent years. Gross domestic product growth averaged 8% annually during 2005–2009, and poverty fell from 81% in 1999 to 53% in 2007. But to sustain economic growth, Tajikistan must increase its connectivity to world markets.

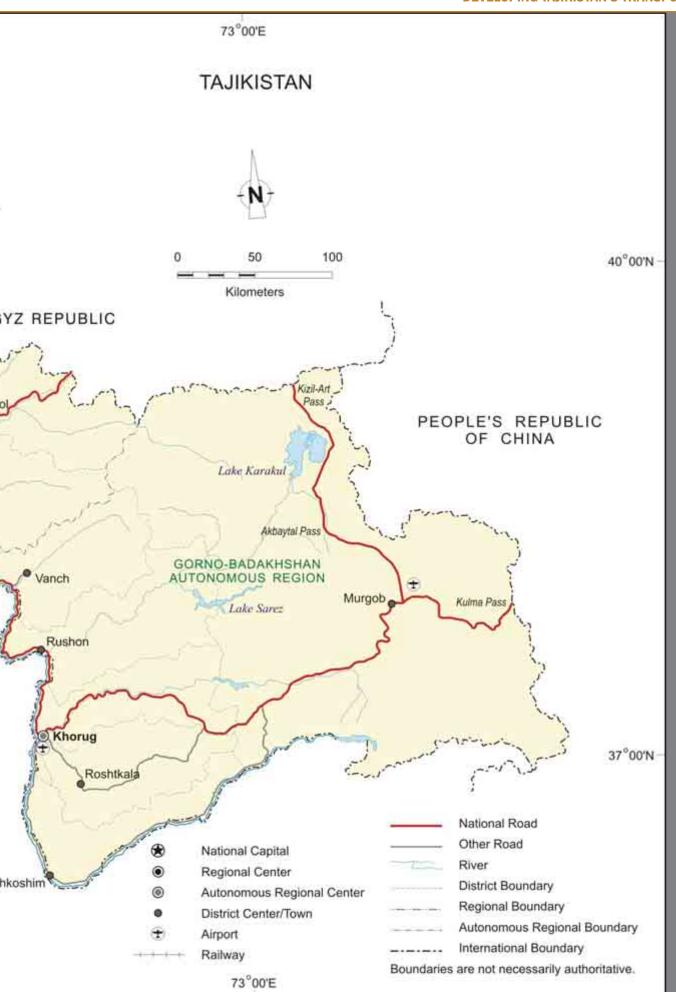
The Tajikistan country partnership strategy for 2010–2014 aims to reach this goal by developing transport infrastructure, building human capacity, and achieving good governance. Moreover, Tajikistan is actively participating in the Central Asia Regional Economic Cooperation (CAREC) Program, which aims to develop seamless connectivity in the region. In this context, Tajikistan has developed a national transport sector master plan with Asian Development Bank (ADB) assistance. This master plan serves as a road map for transport development in the foreseeable future. It is supportive of CAREC's Transport and Trade Facilitation Strategy (2008–2018) and Tajikistan's national development program. ADB will provide financial and technical assistance to support the master plan's implementation.

Hong Wang Director Transport and Communications Division Central and West Asia Department Asian Development Bank



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Vahdat district, Dushanbe–Kyrgyz Border Road Rehabilitation Project (Phase I)

TRANSPORT SECTOR PROFILE

Roads

The Ministry of Transport and Communications (MOTC), Tajikistan's central governing body for the transport sector, has jurisdiction over roughly 14,000 kilometers (km) of the country's road network. About 29% of these roads are paved in asphalt. Some 18,000 km of local roads are not under MOTC jurisdiction, mostly rural roads or industrial access roads. A summary of the roads profile is in Table 1. The road network is oriented toward the Russian Federation and Eastern Europe, with only limited links to the People's Republic of China (PRC) and South Asia. These links are now being improved.

Table 1: Roads Profile

Assets	km	%
Local roads	8,670	62
National roads	2,120	15
International roads	3,178	23
Total road network	13,968	100

km = kilometer, % = percentage of total road network.

Source: Ministry of Transport and Communications, Republic of Tajikistan, 2009.

Railways

Railways carry 50% of Tajikistan's exports and imports. There are three domestic networks: northern, central, and southern. The northern line dominates freight transit traffic,¹ the central line is mainly for imports, and the southern line has a low volume of freight traffic. National rail operator Tajik Railways gets about \$4.20 per ton-km and/or per passenger-km, which is deemed a high rate, particularly since Tajik Railways does not load or unload cargo. Rail passenger traffic is divided about equally between international and domestic service, with comparatively little transit traffic. A summary of the railways profile is in Table 2.

Table 2: Railways Profile

Assets		
Main lines (km)	678	
Rolling stock (km) ^a		
- Locomotives (no.)	40	
- Freight wagons (no.)	943	
- Passenger coaches (no.)	302	
Bridges (no.)	216	
Train stations and terminals (no.)	31	
Total railway network (km)	943	

km = kilometer.

^aOperational units only.

Source: Ministry of Transport and Communications, Republic of Tajikistan, 2009.

¹ Freight is considered to be in transit when its route through Tajikistan constitutes only part of the journey that begins and ends in countries other than Tajikistan.

Air Transport

National carrier Tajik Air operated all domestic flights until recently, but it still carries most domestic passengers and freight. On international routes, Tajik Air competes mainly with the airlines from the Russian Federation and other countries in the region, and accounts for 36% of international passenger flights. Somon Air, a new private airline, started operating in 2008 and is now generating more competition in Tajikistan's airline industry. In 2009, the government unbundled² Tajik Air, enabling it to venture into air navigation services, airport operations, and airline services. A summary of the air transport profile is in Table 3.

Table 3: Air Transport Profile

Tubio of All Humoport Fromo			
4			
34			
13			
21			
3,300			
144,000			
1,200			
3,700			
450,000			

Source: Ministry of Transport and Communications, Republic of Tajikistan, 2009.

Tajikistan has four major airports: Dushanbe (the capital), Khujand, Kulyab, and Kurgan Tyube. Domestic passenger flights between Dushanbe and Khujand account for 89% of all domestic passenger travel, and those between Dushanbe and Khoroug account for another 5%. International passenger travel is mostly to and from the Russian Federation, accounting for 87% of the total. Passenger travel between Tajikistan and Turkey accounts for 4.7%, and that between Tajikistan and the PRC for 4.1%. About 70% of international traffic originates in or departs from Dushanbe, with 28% originating in or departing from Khujand. There was net annual outflow of passengers in recent years since many Tajik people are seeking work abroad.

Intermodal Competition

Domestic traffic. Roads dominate over airlines and railways for domestic freight transport. The average hauling distance for freight is 22 km, much too short for efficient transport by air or rail. Passengers traveling within the country overwhelmingly choose to go by road (Table 4).

Table 4: Domestic Traffic (%)

	Freight Shipment	
Road	99.8	96.6
Rail	0.2	3.4
Air	Negligible	Negligible

Source: Ministry of Transport and Communications, Republic of Tajikistan, 2009.

Roads dominate over airlines and railways for domestic freight transport. The average hauling distance for freight is 22 km, much too short for efficient transport by air or rail.

International traffic. Rail is the dominant mode for international freight transport. International passenger traffic is split evenly among road, rail, and air. Road is the choice for shorter trips and for trips with no transport alternative. The choice between air and rail is determined by cost and time (Table 5). As the Tajik economy develops and incomes grow, many travelers will likely shift from rail to air.

Table 5: International Traffic (%)

Passenger Freigh Travel Shipmen		
Road	27	3.5
Rail	32	95.9
Air	41	0.6

Source: Ministry of Transport and Communications, Republic of Tajikistan, 2009.



Karamyk section before improvement, Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase III)

CHALLENGES

Mountainous and landlocked, Tajikistan has one of Central Asia's least developed transport sectors and among the world's highest transport costs. Since 2000, Tajikistan has dramatically improved its transport infrastructure because regional trade—especially with the PRC and other Central Asian countries—has grown rapidly. The transport sector is working hard to meet soaring demand and overcome a chronic shortage of public funds for investment and maintenance.

Tajikistan's transport sector relies heavily on external aid. With the recent global economic crisis and the buildup of sovereign debt, however, the country's access to financing continues to prove difficult. The government is under pressure to divert its revenues from public services to debt service. Weak governance has also discouraged private capital. Moreover, the government continues to face obstacles posed by the harsh terrain, cumbersome border crossings, and other noneconomic frictions that hinder its efforts to reduce transport costs.

Roads

About \$1 billion in road assets were lost between 1990 and 2010, and 80% of the 14,000 km road network under MOTC's control is beyond repair. Over 50% of the road network has an average international roughness index (IRI) of over 7 meters per km, which results in lower travel speeds, increased fuel consumption, and higher vehicle operating cost. Average vehicle speeds across the road network have declined from 50 km per hour to 30 km per hour. While the road network can accommodate existing traffic, poor road quality limits access and mobility, and thus restricts economic growth. Moreover, vehicle overloading has increased and road safety has deteriorated.

Greater road use accelerates pavement deterioration, creating the need for a larger portion of gross domestic product (GDP) to support road maintenance. The current road budget (0.3% of GDP) falls far short of the minimum maintenance requirements (0.7% of GDP).

Despite Tajikistan's central location in Asia, it sees little transit traffic. Aside from the poor infrastructure, inefficient border-crossing procedures lead to high transport and transit costs and cause foreign truckers to avoid Tajikistan routes.

Railways

Topography constrains the expansion of the railway network, which remains stagnant. Restricted network interconnectivity, too-few and aging rolling stock and locomotives, and a heavy dependence on Uzbekistan and Turkmenistan railway systems force Tajik travelers to resort to the more accessible and flexible road transport. Although the state-owned Tajik Railways has reported profits, it has no major investment in tracks or rolling stock. The northern line generates most of the profits, but this line alone is a too-narrow sales base. The continuing viability of Tajik Railways will depend on the diversification of its income sources. The company also needs to focus on its core functions.

Political factors play an important role in the state of Tajikistan's railways. As over 60% of freight by railway is transit traffic originating from and destined for Uzbekistan, the scale of this traffic is to some extent outside the control of the Tajik authorities.

Air Transport

Air traffic is limited to 500,000 international and 200,000 domestic passengers annually. The size of freight traffic by air is negligible, due to a lack of suitable aircraft and the small volume of high-value exports and imports. With only a tiny market share of freight transport and little external financial assistance, civil aviation must overcome serious institutional, financial, and operational hurdles. There are also growing concerns about maintenance, service, and safety because of the aging aircraft fleet.

Since 2000, Tajikistan has dramatically improved its transport infrastructure because regional trade—especially with the People's Republic of China and other Central Asian countries—has grown rapidly.

Intermodal Traffic

The volume of international container freight traffic in Tajikistan is small because of (i) a lack of agreed conventions with neighboring countries to use foreign containers, (ii) the country's poorly equipped freight terminals for handling containers, (iii) low backload volumes, and (iv) the small proportion of high-value and perishable cargoes.

Transport Sector Governance

Since 2006, MOTC has changed its approach markedly: the ministry now aims to commercialize and eventually privatize its noncore functions. Yet the government's incomplete legal and institutional frameworks, deficient commercial vision, and extensive skills gaps deter opportunities for public—private partnerships (PPP). A PPP pilot scheme was introduced for the Dushanbe–Khujand–Chanak road on 31 March 2010. The performance of this road is being assessed but work is at an early stage. Lessons will be learned from this pilot scheme and future rollout plans will need to consider market conditions, externalities, and government development objectives. As there are wide variations in PPP transactions, the government needs to decide which PPP model best suits each project (Figure 1).

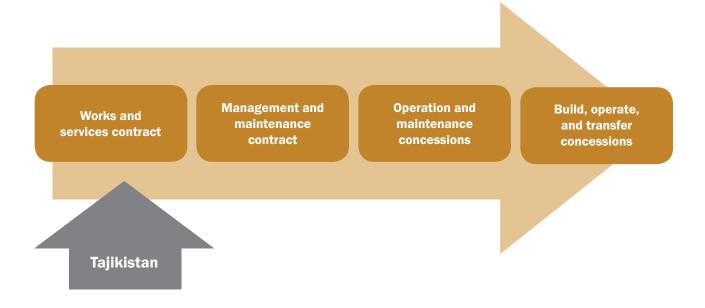


Figure 1: Public-Private Partnership Progression



OPPORTUNITIES

Transport policy is a powerful instrument that can shape a country's physical development, including its residential, industrial, and economic landscapes. A good transport policy lays out the groundwork for sustainable sector growth by (i) providing for basic services; (ii) defining clear and consistent legal, institutional, and regulatory frameworks; and (iii) rebalancing strategies to achieve policy goals.

Higher investment in the transport sector can boost economic growth and living standards because well-developed infrastructure will attract industries, skilled labor, and trade. Unpredictable investment, however, threatens a country's ability to channel funds into transport facilities. Tajikistan can solve this problem by creating an investment-friendly environment, which would entail a leaner institutional structure, policies, and regulations reflecting a longer-term vision; and human resource development.

To attract investment, the government should limit its role to (i) establishing and fulfilling policy, legal, and regulatory functions in the transport sector; (ii) planning and monitoring implementation of sector development programs and facilitating resource mobilization; (iii) monitoring the performance and efficiency of transport systems; and (iv) licensing transport services to ensure safety and environmental standards.

STRATEGIC DIRECTION

The government's transport strategy needs to be aligned with its regional and national development strategies and programs. It should also take into account such factors as unmet needs, costs, available resources, affordability, and long-term socioeconomic and environmental impacts.

Regional transport strategy. With four of the six Central Asia Regional Economic Cooperation (CAREC) corridors (2, 3b, 5, and 6b/c) crossing its territory, Tajikistan is well positioned to serve as a regional transport hub. CAREC's Transport and Trade Facilitation Strategy (2008–2018)³ identifies two main issues: poorly maintained corridors and inefficient border crossings. It also lists several priority investments.

Milling (left) and load testing (right), Dushanbe–Kyrgyz Border Road Rehabilitation Project (Phase III)

³ ADB. 2009. CAREC Transport and Trade Facilitation Strategy. Manila.

National transport strategy. Most transport investments are allocated to roads, as they are the most accessible and affordable transport mode for domestic freight and passengers. Railways serve primarily for imports and exports, and civil aviation caters to long-distance passengers. The current infrastructure capacity is sufficient, but requires extensive maintenance and overhaul. Because the government lacks sufficient funds, private capital is essential. Given that the private sector is averse to political, regulatory, and macroeconomic uncertainties, the government should work harder to create an investment-friendly environment for PPP transactions and operations (Figure 2). PPPs can significantly improve operational efficiency and service delivery.

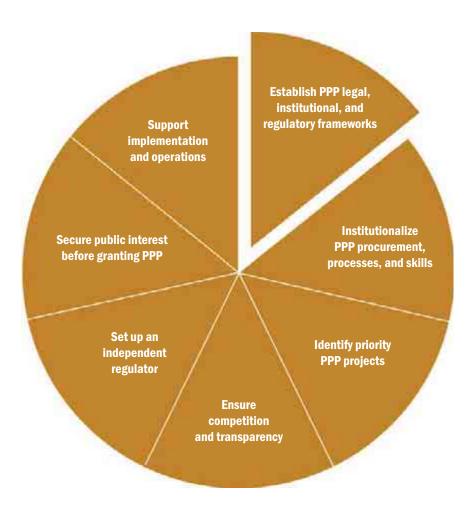
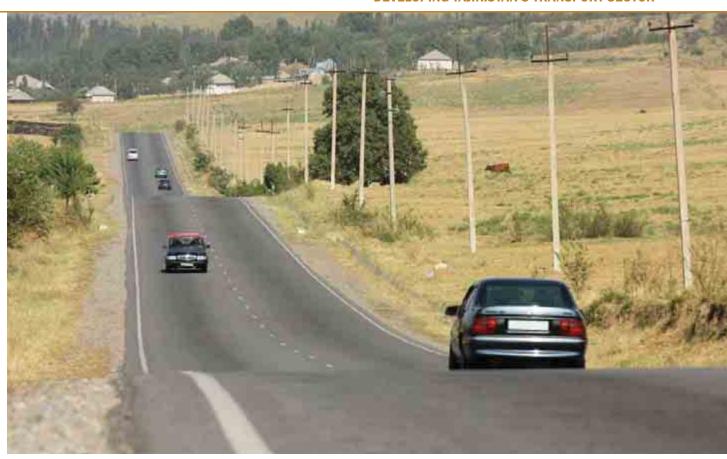


Figure 2: Public-Private Partnership (PPP) Requirements



Transport sector framework. The government's transport sector framework needs to be clearly communicated and understood. A framework is a basic guideline for the sector players, specifying quantifiable and measurable performance indicators and targets (Table 6). For monitoring results, baseline data must be available.

Fayzabad district, Dushanbe–Kyrgyz Border Road Rehabilitation Project (Phase I)

Table 6: Sample Transport Sector Performance Monitoring Framework

Transport Subsector	Performance Indicators	Targets
Road	Roads rehabilitated and maintained: (i) Average road network roughness reduced to IRI < 3 m/km Road accidents reduced: (i) Accidents per 10,000 vehicles (ii) Fatalities per 10,000 vehicles	1,000 km by 2015 2,160 km by 2020 3,230 km by 2025 Accidents reduced by 10% by 2015 Fatalities reduced by 10% by 2015
Railway	Rolling stock replaced or modernized Freight productivity increased from 1,280 million tons/km in 2009 Operations self-sustained	50% of inventory by 2015 100% of inventory by 2020 1,500 million tons/km in 2015 1,700 million tons/km in 2020 Corporatized by 2015
Civil Aviation	Air fleet and navigation system modernized Operations self-sustained	50% of inventory by 2015 100% of inventory by 2020 Corporatized by 2015

IRI = international roughness index, a worldwide standard for measuring pavement smoothness; km = kilometer; m = meter.

^a"Self-sustained" means that profits are sufficient to cover future capital investments.

DEVELOPMENT ACTION PLAN

Roads

The government needs to take the following actions in the short, medium, and long terms (Table 7). In the short term (2011–2015):

- (i) Rehabilitate CAREC corridors.
- (ii) Increase maintenance funding.
- (iii) Improve road data collection and compilation.
- (iv) Improve efficiency with unbundling, privatization, mechanization, and quality control.
- (v) Introduce systematic road-user charges, based on the costs of vehicular road damage.
- (vi) Simplify and harmonize border-crossing requirements.

Table 7: Road Investment Plan, 2011-2015

Priority Order	Tajikistan Road Reference	CAREC Corridor Reference	Road Name	Length (km)
1	International Road (IR) 02-001/002	Corridor 3b	Dushanbe-Tursunzade-Uzbekistan border	62.0
2	IR 09-001	Corridor 5 (partly)	Dushanbe-Rudaki-Shaartuz-Aivaj-Afghan border (Dushanbe to Obikiik)	44.6
3	IR 13-001	Corridor 2	Kanibadam-Khujand-Khavast-Spitamen-Uzbek border (Kanibadam to Spitamen)	70.0
4	IR 04-008		Dushanbe-Kulyab-Khorog-Murgab-Kulma Pass-PRC border (Khorog to Tuzkul)	185.0
5	IR 13-002	Corridor 2	Kanibadam-Khujand-Khavast-Spitamen-Uzbek border (Spitamen to border)	65.0
6	IR 04-002		Dushanbe-Kulyab-Khorog-Murgab-Kulma Pass-PRC border (Nurek to Dangara)	53.0
7	IR 04-007		Dushanbe-Kulyab-Khorog-Murgab-Kulma Pass-PRC border (Rushon to Khorog)	85.0
8	IR 09-004	Corridor 5 (partly)	Kanibadam-Khujand-Khavast-Spitamen-Uzbek border (Spitamen to border)	85.0
9	Republic Road 049		Kolkhoz Russia-Guliston (Russia Kolkhoz to Gulistan	9.1
10	IR 08		Guliston-Farkhor-Panj-Dusti (Gulistan to Dusti)	132.0
11	IR 16		Isfara-Vorukh-Kyrgyz border (Isfara to Kyrgyz border)	43.9
12	IR 04-005		Dushanbe-Kulyab-Khorog-Murgab-Kulma Pass-PRC border (Kulyob to Kalaikhum)	168.1
Total				1,002.7

CAREC = Central Asia Regional Economic Cooperation, km = kilometer, PRC = People's Republic of China.

Source: Ministry of Transport and Communications, Republic of Tajikistan, 2010.

In the medium term (2016–2020):

- (i) Continue rehabilitating international corridors and start rehabilitating key national roads.
- (ii) Improve and complete connections to the PRC.

In the long term (post 2020):

(i) Complete the rehabilitation of international and national roads, and gradually expand investment to local roads.

Financing requirement. About 1.8% of Tajikistan's GDP is required for roads, with 1.1% for rehabilitation and at least 0.7% for periodic and routine maintenance. In the short to medium term, rehabilitation projects will be supported by external financing. Increased reliance on concessional financing will be likely because of Tajikistan's vulnerability to economic volatility and its excessive foreign debt. In the long term, the country will phase out its reliance on concessional funds with the implementation of ring-fenced road user charges.

Railways

Although fragmented, Tajikistan's tracks on all lines have sufficient capacity for expected traffic until 2025. Priority investments in rehabilitation and maintenance total about \$260 million. This large sum is critical for efficient and safe operations. Tajik Railways needs to take the following actions in the short, medium, and long terms.

In the short term (2011–2015):

- (i) Rehabilitate the existing assets (wagons, coaches, and locomotives); and repair facilities, tracks, and quarries.
- (ii) Explore better provisions for the existing traffic base of Tajik Railways, particularly for international and Uzbek transit traffic.
- (iii) Set up business development and planning units.
- (iv) Prepare for containerization and multimodal traffic.
- (v) Create a database for use by Tajik Railways and MOTC, including (a) comprehensive track inventory and condition surveys, with regular updates; (b) passenger travel and cargo shipments, by origin and destination; (c) cost-accounting information by service and line section; and (d) regional development and expansion.
- (vi) Corporatize railway operations.

In the medium term (2016–2020):

- (i) Continue to rehabilitate existing infrastructure and modernize rolling stock.
- (ii) May subsidize selected railway lines that have high social importance.



Km 33+500, Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase II)

In the long term (post 2020):

- (i) Expand major railway lines, depending on committed regional development programs that involve sections of the domestic rail network.
- (ii) Privatize Tajik Railways.

Financing requirement. About 0.6% of Tajikistan's GDP needs to be allocated to railways: 0.4% to modernize rolling stock and 0.2% to rehabilitate infrastructure. In the short term, Tajik Railways can finance part of the total cost of infrastructure rehabilitation and rolling stock modernization. Expansive infrastructure overhaul will be necessary in the medium to long term. Major railway development will be aligned with regional development frameworks, and the countries involved will share the costs.

Air Transport

Tajik Air has been unbundled into three operations that will be privatized and corporatized. In the short term (2011–2015), Tajik Air, while still owned by the government, will need to take the following actions:

- (i) Commercialize air service, air traffic control, and air terminal operations.
- (ii) Improve safety.
- (iii) Build new terminal facilities in Dushanbe.
- (iv) Dispose of obsolete facilities and equipment.
- (v) Modernize the air navigation system and aircraft fleet.

In the medium term (2016–2020):

- (i) Modernize terminal facilities at minor aerodromes.
- (ii) Expand the network to provide regular service to remote locations at competitive rates.

In the long term (post 2020):

- (i) Privatize Tajik Air.
- (ii) Break even financially without subsidies, and eventually make profits.
- (iii) Compete on an equal basis with neighboring airlines.
- (iv) Operate within the private sector.

Financing requirement. Less than 0.2% of Tajikistan's GDP is invested in airport infrastructure, airline safety, and air traffic control equipment. In the short term, the improvement of airline safety and terminal facilities will require subsidies and external financial support. In the medium to long term, Tajik Air will be privatized and the air industry will start operating for profit, provided that key reforms have been made to enable the airline to attract private capital.

Intermodal Traffic

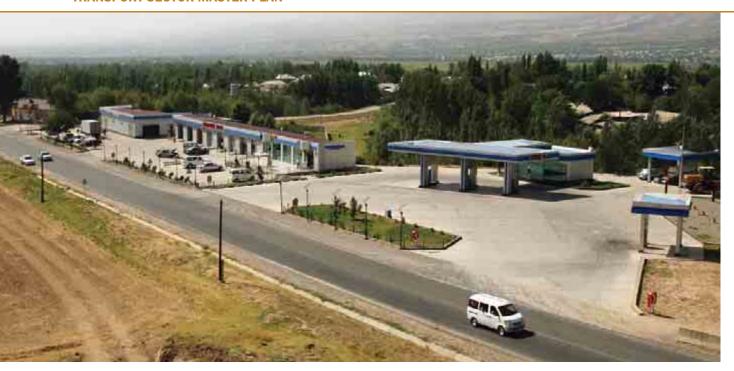
Intermodal traffic is expected to grow rapidly. Implementation of the Customs Conventions on Containers is a priority. The Tajik International Association of Truck Haulers (ABBAT) and Tajik Railways will invest in (i) container-handling equipment in Dushanbe and Khujand, the two most important freight terminals; and (ii) other container freight stations that handle intermodal transfers and the consolidation of cargo. In the medium term, the container freight stations will need to be corporatized.

Financing requirement. Full technical and financial feasibility studies will need to be prepared with a provisional investment of \$10 million. Tariffs for the use of these facilities should be sufficient to recover long-term costs and finance increases in capacity.

A summary of the policy recommendations for the transport sector is in Table 8.

Table 8: Policy Recommendations for the Transport Sector

	Road		Railway		Air
Short Term (2011–2015)					
(i) (ii) (iii) (iv)	Update and streamline legal and regulatory frameworks and technical standards. Maintain the existing infrastructure (including border-crossing facilities). Improve safety via vehicle inspections and policing. Make subsidies, if any, specific and transparent.	(i) (ii) (iii)	Focus on commercial activities and core businesses. Introduce feasibility studies for capital investments. Set clear costing systems for each railway line, section, and service type.	(i) (ii) (iii)	Concentrate on core businesses. Ensure a transparent procurement process. Introduce competition.
			Medium Term (2016–2020)		
(i) (ii) (iii) (iv) (v)	Introduce taxes and/or user charges sufficient to recover road damage costs. Open the market to all passenger and freight services. Harmonize border-crossing procedures. Implement single-window scheme. Regulate environmental pollution.	(i) (ii) (iii)	Maintain the existing network. Unbundle noncore activities. Corporatize operations.	(i) (ii) (iii) (iv)	Make subsidies specific and clear. Dispose of all unused assets. Open the market to all passenger and freight services, subject to safety regulations. Allow the private sector to bid.
			Long Term (post 2020)		
(i) (ii) (iii)	Improve transparency to promote public- private partnership. Introduce a public consultation system. Improve the compulsory insurance system.	(i) (ii) (iii)	Coordinate with neighboring countries to work for efficient regional interconnectivity. Upgrade infrastructure and equipment. Allow the private sector to bid.	(i) (ii)	Privatize the air service arm of Tajik Air. Compete with other private sector operators in an open market.



Roadside facility, Dushanbe–Kyrgyz Border Road Rehabilitation Project (Phase III)

Investment and Resource Planning

Government budgets are based on annual plans, even though commitments have multiyear effects on investments and recurrent expenditures. The government addressed the need for a change in its budget planning by introducing the Medium-Term Expenditure Framework (MTEF). Within the MTEF, subsector targets reflect resource constraints rather than demand. For each target, priorities have to be established, with programs and projects reduced or dropped if the allocated budget is insufficient. The current lack of planning for multiyear rolling investments and recurrent expenditures makes it difficult to predict their impact on the national economy, including on each subsector.

The resources generated from road users—including all tariffs, fees, charges, and excise taxes—amount to 73 million somoni (TJS) per year. A strong case can be made for diverting these funds from the government budget to road maintenance. This will move the government toward its goal of making annual road maintenance self-financing. Requirements for self-financing are now in place for railways and civil aviation. Tajik Railways has received substantial investment funds for strategic projects (e.g., a railway station), but it is currently utilizing its annual surpluses for commercial purposes, specifically for the renovation or replacement of train cars. Tajik Air has also benefited from government funding, but is expected to be fully self-financed in the near future.

Total expenditures in the transport sector between 2010 and 2025 are estimated at \$2.3 billion, with \$840 million for the short term, \$580 million for the medium term, and \$900 million for the long term. Roads will absorb \$1.7 billion; railways, \$500 million; and civil aviation, \$100 million. The government's contribution will grow to about \$1.0 billion, which will be shared by the subsector agencies: \$934 million for roads (including \$600 million for maintenance), \$90 million for railways, \$22 million for civil aviation, and about \$10 million to rehabilitate container terminals for intermodal transport. The government assumes that the balance of \$1.3 billion will be financed externally until operational cost-recovery mechanisms are in place.

Human Resource Development for Good Governance

Equally important is investment in human resources. The supply of skilled professionals may soon be insufficient to meet demand. Emerging markets, especially the PRC and, to a lesser degree, India, have poured resources into education over the last 2 decades. Likewise, the government needs to attract young commercially minded professionals by offering promising career prospects and a merit-based pay system, and by encouraging job training and continuing education programs. Inexpensive long-term university curriculum support and tuition grants may stanch the brain drain that has undermined Tajikistan's economic growth. MOTC needs to develop a human resource development plan and restructure institutional arrangements to fit the needs of the transport system.

MOTC needs to drive policy changes and coordinate transport sector development and planning. This will require a clear political, technical, and financial shift in the decision-making process to ensure a swift and smooth transition to good sector governance. Good governance will involve laws and regulations; standards (including safety and environmental); planning; financing; marketing (for aviation and railways); construction, operation, and maintenance; procurement outsourcing; management; and ownership. These complex goals require new and improved methods of supporting each subsector: for example, by rationalizing MOTC's staff resources, upgrading its information technology and management systems and skills, and streamlining its operations. An action plan for MOTC's good governance is in Table 9.

Table 9: Governance Action Plan of the Ministry of Transport and Communications (2011-2020)

Issues	Actions	Performance Targets/Indicators		
Centralized government role in the transport sector	Short to medium term: (i) Restructure MOTC operations through divestiture, consolidation, and outsourcing. (ii) Improve public information, customer service, and outreach. (iii) Enhance technical and commercial capacity of government and the private sector. (iv) Reduce ad hoc policy making and project modifications, and broaden commercial outlook. (v) Support ancillary subsector operations.	Short term: (i) Streamlined MOTC operations (ii) Rationalized staffing in MOTC, with increased staff productivity (iii) Articulated commercial vision and targets laid out in policies and public documents Medium term: (i) Increased participation of private operators		
Incomplete legal and regulatory frameworks	Short term: (i) Update legal and regulatory framework for the transport sector. (ii) Legitimize and increase opportunities for the private sector.	Short term: (i) Legal department established in MOTC staffed with experts in commercial law		
Inadequate institutional arrangements	Short term: (i) Clarify institutional roles and functions. (ii) Limit any conflicts of interest involving MOTC. Medium term: (i) Establish a board of directors for transport sector oversight.	Short term: (i) Overlapping technical and financial regulatory functions removed from government ministries and agencies (ii) Evolving MOTC role from micro-manager to strategic partner, policy maker, and regulator Medium term: (i) Board of directors established		

Issues	Actions	Performance Targets/Indicators
Weak procurement system	Short to medium term: (i) Build procurement capacity beyond routine tender processes. (ii) Improve systems for documentation.	Short term: (i) Automated contract management system set up (ii) Financial and technical audits performed Medium term: (i) "Smart procurement" warehousing, bulk procurements, and resource optimization approach all implemented (ii) Internal audit unit established in MOTC Long term: (i) Increased leasing and rental options, reducing the need for massive procurements (ii) Construction industry developed
Weak planning and costing systems	Short to medium term: (i) Introduce multiyear budget-support programs. (ii) Develop tools for planners to ensure integrated coverage of costs and technical requirements. (iii) Where the project costs cannot be met, set up decision-making tools to determine whether to eliminate or modify the projects.	Short term: (i) Computerized road databank (ii) Systemized regular surveys and data collection (iii) Revamped economic forecasting and planning unit in MOTC (iv) Annually updated and implemented transport sector master plan Medium term: (i) Existing infrastructure maintained Long term: (i) Infrastructure network enlarged
Limited technical capacity	Short term: (i) Update technical skills regularly. Medium term: (i) Develop materials-testing capability. (ii) Adopt new institutionalized technical standards and practices.	Short term: (i) Expanded technical job training (ii) Updated university programs and courses Medium term: (i) Technical laboratories set up, and relevant standards and practices modernized
Shortage of qualified professionals	Short to medium term: (i) Improve human resources planning. (ii) Cultivate management capacity. (iii) Support modern technical and commercial skills at universities and enterprises.	Short term: (i) Internships, young professional, and mid-career training programs established (ii) Merit-based hiring and promotion implemented (iii) Increased salaries and other incentives comparable to market levels put in place

MOTC = Ministry of Transport and Communications.



Developing Tajikistan's Transport Sector: Transport Sector Master Plan

As a small landlocked country, Tajikistan depends on external trade for its development, and its export-driven businesses in agriculture and industry require transport that is fast, reliable, and cheap. Tajikistan must increase its connectivity to world markets. The country partnership strategy for 2010–2014 aims to develop transport infrastructure, build human capacity, and achieve good governance. Tajikistan is active in the Central Asia Regional Economic Cooperation (CAREC) Program, which aims to develop seamless connectivity in the region. Tajikistan has also developed a national transport sector master plan with Asian Development Bank (ADB) assistance. The plan is supportive of CAREC's Transport and Trade Facilitation Strategy (2008–2018) and Tajikistan's national development program. ADB will provide financial and technical assistance to support its implementation.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries substantially reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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