

Government of the Republic of Tajikistan

RESOLUTION

On endorsement of the National Earmarked Development Program for the Transportation  
Sector of the Republic of Tajikistan up to 2025

In accordance with Article 7 of the Law of the Republic of Tajikistan "On transportation", with the purpose of development of the transportation sector and identify the priority areas in this sector the Government of the Republic of Tajikistan enacts:

- 1) Approve the National Earmarked Development Program for the Transportation Sector of the Republic of Tajikistan up to 2025 (Attached).
- 2) The relevant ministries and agencies, local government executive bodies in the regions, cities and districts of the country shall take into account this enacted Program while preparing the government projections, developing concepts and social and economic development programs and submit the update on the progress to the Government of the Republic of Tajikistan not later than on March 5th, each year.
- 3) Ministry of Transportation of the Republic of Tajikistan shall develop the action plan to implement this program and annually provide information on the progress of its implementation to the Government of the Republic of Tajikistan.

Chairman of the Government  
of the Republic of Tajikistan  
April 1st, 2011 - № 165  
Dushanbe city

Emomali Rakhmon

Approved by the Resolution of the  
Government of the Republic of Tajikistan  
dated April the 1<sup>st</sup>, 2011- №165

On endorsement of the National Earmarked Development Program for the  
Transportation Sector of the Republic of Tajikistan up to 2025

## I. Background

The Republic of Tajikistan has the territory of 143.1 thousand. square km located in the mountainous part of Central Asia, in the center of the intersection that links developed transportation networks of the North (Russia and Kazakhstan transportation networks) with the major international trading ports of the South (port cities at the coast of Indian Ocean), and on the way of the shortest trade route linking the East (including the People's Republic of China with its high economic development pace) with the West (Europe and other states of the Mediterranean basin).

The transport infrastructure of the country that was mainly built in the 60s-80s of the last century as part of the USSR transport network was characterized by one-sided territorial deadlock. It has rapidly degraded in the 90-ies for objective reasons.

Due to the fact that in the new historical stage of economic development the existing transport infrastructure did not match strategic objectives of economic development in terms of internal and external traffic, it became necessary to determine the new trend in infrastructure development along with other strategic objectives of the country economy.

The transportation sector of the Republic of Tajikistan includes automobile, rail and air transport as well as motor roads. Due to the specific geographic conditions of the country, 93% of its territory is mountainous area and the road transport plays an important strategic role among the other types of transportation, especially in part of ensuring regular in-country transportation and coverage of all regions of the country.

Therefore the special attention is given to the development of the motor road network and its facilities that would ensure connection with the other regions of the country all the year round.

With the development of road transport, the rail network expansion to make it the largest carrier in the field of international traffic has been also identified as an important factor in the transport structure of the country. Special focus in this area is given to construction of new railway lines connecting the center with the strategically important regions of the Republic, with the railway networks of neighboring countries and its future transfer into the main line of international transit traffic is seemed to be the main basis of the international transport communication.

Implementation of the structured reforms, upgrading and strengthening the technical basis, building airport facilities and modern terminals in this sector as well as ensuring independent air traffic control system for the country play an important role in improving the quality of servicing and competitiveness of the national air traffic companies at the international level.

“National Earmarked Development Program for the Transportation Sector of the Republic of Tajikistan up to 2025” (hereinafter referred to as “Program”) was developed based on the multifactor analysis, forecast and development program for all components of the transportation sector of the Republic of Tajikistan taking into account that transport complex is the leverage for other sectors of real economy.

## **2. Goals, objectives and basic principles of the Program**

### *1) Program goals and objectives:*

- develop set of measures on the consequent development of transport sector of the Republic of Tajikistan that could meet the demand of the population of the Republic of Tajikistan in cost effective and safe transport servicing in short-term and long-term perspective;
- establish infrastructure transportation network of the Republic of Tajikistan that could meet economic and common requirements complying with the set up safety and security standards.

2) Consistent development of the transport industry of the Republic of Tajikistan enables for the development of related economic sectors, creation of many new job places and improvement of social welfare. Therefore it is necessary to pay special attention to the development of all areas of the transportation sector of the Republic that could be achieved as a result of government regulation of the sector. Obviously, such process should be implemented under one program of macroeconomic and intra-sectoral development.

The main objective of the program is to ensure trustful, effective, efficient and integrated transport work and infrastructure that will promote social and economic development of the region. It could be achieved by increasing the level of service maintenance and reducing to the possible minimum the transportation costs, improving quality of roads, railways and airlines.

It should be noted that the implementation of this program will also provide the real prerequisites or the achievement of key indicators of national development strategy and poverty reduction strategy. The most important indicator, characterizing the importance of this or another sector for economy or social area is the contribution of the sector in formation of Gross Domestic Product (GDP).

Growth of real investments in the transportation sector is an important condition for strategic tasks on acceleration of the GDP growth for the Republic of Tajikistan. The unit weight of transport costs in the cost of production ranges from 5 to 35 percent depending on the economic sector.

Technically and morally outdated transportation fleet prevents the reduction of distribution costs and leads to a marked reduction of competitiveness of transport services in the Tajik economy.

The most important social and economic parameter that influences the volumes of passenger at rail and air transport is the growth rate of real per capita income. The analysis shows that with an increase in real income for 1 percent, the volume of air passengers increases in average for 1.6 percent.

3) Present Program is based on the findings of studies carried out by international financial institutions and sets its objectives as the following:

- provide infrastructure, which minimizes the total transportation costs;
- ensure the development of certain kinds of transportation within their effective operation;
- facilitate of an increase in transit capacity of the country and its transformation into the tourism region;
- contribute to development of free competition on domestic and international markets of transportation services.

4) The Program was developed based on the following justified assumptions:

- GDP will have a steady growth in the short-term period, economic growth will be at 5 percent per year and in long term period - up to 4 percent;
- Annual growth rate of transport will continue to outpace the GDP growth and amount to 1.4 percent to 1 percent of GDP growth for the motor transportation and 1.6 percent to 1 percent of GDP growth for air and railway transportation.

5) In determining the amount of necessary investments for the implementation of the measures specified in the Program, the following criteria will be used:

- economic efficiency of investments - 15 percent;
- level of risk for the implementation of the Program - the smallest;
- more attention shall be paid to the regions with the highest poverty levels and social needs of population;
- focus on international main lines.

6) The program will be implemented under three following restrictions, namely:

- Increased Government contributions only in case of increase of budget revenues;
- Non-concessional loans (and some soft loans) under the limits set up from the point of international financial institutions;
- External loans are made only based on GDP growth.

Therefore:

a) in motor transport sector:

- private sector and local government authorities will be involved in upgrading the motive power;
- a network of logistics centers (transport terminals) will be established mainly out of the concessional lending and own funds of carriers;

b) in railway sector:

- projects will be implemented using own revenues and attraction of private capital;

c) in the air sector:

- the airlines should be able to purchase using commercial interest rates the necessary equipment, airplanes and helicopters;
- operation of airport, terminals and traffic control will be ensured due to the improved quality of service;

d) in the road sector (automobile and railway transportation) in the short and medium term period the rehabilitation program shall be fully financed out of the grants and concessional loans from international financial institutions. In the long-term perspective the funds required for renovation, construction and maintenance of roads will be provided entirely out of the contributions from the local road users.

### 3. Analysis of the current situation in the sectors

8) Transition to free market relations, Soviet Union collapse, and elimination of the centralized system of the transport sector reflected in the key transport sector performance indicators. Therefore from 1991 to 1996, transportation of goods by all kinds of transportation reduced in 2.7 times, freight turnover in more than 3.7 times, transportation of passengers - in 4.3 times. Economic liberalization and structural reforms in the transport sector led to the development of the free market of transport services and its integration into the developing market economy of Tajikistan. The regulatory framework and transport management system has been changed.

Formation of trends of economic growth starting from 1999 and improvement of social welfare of population have established a regular increase of effective demand for transport services. According to official statistics, in 2000-2008, the transportation sector of the Republic of Tajikistan as a whole has met the growing demand for transportation of freights and passengers.

The main factor influencing the growth in volume of freight traffic is the growth in construction and industrial production.

It should be noted that nearly 70 percent of economic goods is transported by the road transportation.

9) However, it should be noted there is a number of serious problems that may further level in general the positive trends of the recent years. These problems include:

- High (50-70 percent in some regions and sub-se-ctors) depreciation of rolling stock (trains, cars);
- Price dynamics of transport services that constantly exceeding the inflation rate;
- High levels of construction in progress and delays in commissioning the main transport infrastructure facilities;
- Relatively low degree of safety in the transportation sector.

10) Further existence of the indicated problems can lead to a situation, where domestic transportation sector will not be able to cope with the growing needs of the economy of the country. It can affect the intensity (on business: the activity of economic entities, its effectiveness and, ultimately, may become a barrier for the measures planned by the Government of Tajikistan on socio-economic development in the long run for GDP growth.

11) Motor transportation plays an important role in the national economy as a key element of the production infrastructure. It covers over 90 percent of freight and passenger traffic within the country.

In 1992-2000 the volume of freight and passenger transportation by motor transport tended to decline, but starting from 2001 it has a tendency of steady growth. In average the growth of these indicators in 2008-2010 in transportation of goods amounted to 21.7 percent, and conveyance of passengers - 4.4 percent.

Analysis of vehicle fleet in terms of being in operation indicated progressive deterioration of the motive power. For example, share of trucks and buses in operation for over 10 years has increased to 80 percent.

It should be noted that in 2010 in the Republic of Tajikistan 297, 272 units of vehicles was registered that is for 111, 588 units more as compared to 2000. The share of passenger cars in the total number is over 80 percent, trucks -14 percent, buses - 6 percent.

Motor transport industry has undergone the process of privatization in an accelerated manner and therefore it should be noted that the monitoring of the production processes in motor transport was significantly reduced.

As of today there is no, for example, introduced mechanisms to monitor the technical and economic indicators (age, running capacity or seating capacity exact number of run for a certain period of time, volume of work performed, etc.) and statistical monitoring of these indicators in the private motor transport sector. As a result, the assessments of transportation sector are highly conditional and drop out of the statistical reports. This process is also facilitated by the operation as an individual entrepreneur in the market of transportation service using patent permits.

In 1994, based on Dushanbe affiliate of the Central Asian Railways, the Tajik Railway was established. The length of the basic way is 679.9 km, 61.5 km of which are double-track lanes. Tajik railway has 33 stations, including 10 railway stations in central sector, 10 - in the north and 13 stations – in the south.

In 1999, the new railway was commissioned between Kurgan-Tube city and Kulyab city with the length of 132 km.

At present, Tajik railway consists of three unrelated lines (central, northern and southern). All these sites are connected through Uzbekistan and Turkmenistan.

As of today, Tajik railway has on its balance 2128 freight stock, 397 passenger stocks and 55 locomotives.

Total volume of freight carried by railway transportation in 2010 was 10439.9 thousand tons, out of which 4927.1 thousand tons are goods in transit.

The northern section of the railway is more developed and advanced as transportation share by this section amounted to 66.7 percent of the total volume and 100 percent of transit cargos.

Only 0.9 thousands passengers out of the total number of passengers (593.8 thousand passengers) transported in 2010 were passengers in transit.

13) Air transport compared with other kinds of transportation is characterized by the high speed transportation of passengers and cargoes.

However, its conditions are characterized by high production costs, dependence on weather conditions and limited size to weight ratio of the cargoes transported. Therefore, this sector of



the transportation sector is focused primarily on provision of long-distance passenger transportation as well as on urgent delivery of expensive goods of in small lots.

Air traffic operations of the Republic are performed by four international airports, three domestic airlines operating for more than 58 thousand Km. of air routes.

The air fleet in the country includes 37 units in total, 33 aircrafts and 4 helicopters. 45 percent of airplanes and 75 percent of helicopters out of total number of aircrafts are operational.

Aircraft operators mainly use aircrafts of CIS production, which are uncompetitive on international routes. To increase the activity of aviation services and create competition on international routes from 2007 up to date, local airlines purchased and use 8 modern aircrafts - "Boeing", which meet international requirements and more than 90 percent of international transportation was performed by these aircrafts.

The share of international air traffic of the Republic of Tajikistan with Russian Federation is 87 percent, with People's Republic of China - 4,7 percent and 4.1 percent with Turkey. The remaining part of international flights is performed to Kazakhstan, Kyrgyzstan, Iran and UAE.

It should be noted that the share of domestic airlines in total number of international traffic is about 45 percent. About 70 percent of all international flights is carried out from Dushanbe Airport, 28 percent out of Khujand Airport and 2.0 percent from the airports in Kurgan-Tybe and Kulyab cities.

14) Roads occupy a special place in the transportation sector of the Republic of Tajikistan.

Public Road System of the country has undergone a radical transformation during the years of independence. Construction and rehabilitation of roads and tunnels goes with the rapid pace, enabling to have a year-round communication of the center of the Republic with all its regions.

From 2005 to 2010, a number of road construction and rehabilitation projects have been implemented including: Dushanbe - Khujand - Chanak (border of the Republic of Uzbekistan), Dushanbe - Rasht - Karamyk (border of Kyrgyzstan), Dushanbe - Kulyab - Khorog - Kulma (the border of China), Dushanbe - Kurgan-Tube - Nizhniy Panj (the border of the Islamic Republic of Afghanistan) and several other important projects.

Currently, the total length of public roads for general use is 13 968 km and those which are not for general use is 12 791 km.

A characteristic of the road density is one of the traditional indicators, determining the need for resources for the development of transport infrastructure. This indicator is particularly

important in determining the priority of cargo and passenger transportation between the road and rail transport.

Density of road network per 1,000 sq. km. area of the Republic of Tajikistan in 2010 was 187.0 km (including paved roads - 104.4 km), which is substantially lower than that of developed countries (USA -600, Canada, 300 km/1000 km).

The issue of paving the roads with asphalt coating in the regional aspect is of great socio-economic importance.

According to statistics, the road network in Tajikistan in 2008 was 26 766 km. All the roads are public. The network of public roads under the Ministry of Transportation and Communications consists of 13 975 km of roads (52.2% of the network). Departmental roads are 12 791 km, i.e. 47.8% of the whole road network. The network of public roads for general use includes 5291 km. of national and 8684 km. of local roads, i.e. 37.9% and 62.1% respectively.

National roads are main arteries, forming a network of roads, which are indexed and include 17 international and 86 national roads.

It should be noted that in accordance with the classification of roads in the country there are almost no roads of category I and only 1.1% of all roads belong to category II. In addition, 23.1 percent of national and 84.1 percent of local roads belong to the category V.

By type of coating 28 percent of the length of roads is asphalt coating, 45 percent - bitumen-treated gravel and the remaining 27 percent is gravel, untreated bitumen.

42 percent of other national roads have the length of less than 10 km and 92 per cent - less than 50 km. Out of this 96.5 percent are intra-rayon roads; and the remaining 3.5 percent are inter-rayon roads which servicing more than one rayon.

In accordance with specifications, these roads are classified as category II-Y roads. Out of these, more than 46 percent in length are classified as category III roads, 41 per cent – as category IV and about 13 percent – as category Y road. Among them 1385.4 km of roads of higher socio-economic importance than the other roads, and relatively higher volume of traffic is registered on them. In addition, there are 1261 local roads with total length of 8684 km., which connect rural settlements and also lead to the main roads. The length of the majority of

these roads (more than 60 percent) is less than 5 km and about 3.2 percent of these roads have the length of more than 25 km.

The length of the departmental roads is 12,791 km. These are mainly the industrial, technological and access roads in various sites and agricultural lands. These roads are not roads of general use and are on the balance and financial support of several ministries and agencies, committees and executive government bodies of cities and regions

Tajikistan is located in the network of Asian motor roads and has border with the Republic of Uzbekistan, Kyrgyzstan, Islamic Republic of Afghanistan and People's Republic of China. There are 25 border checkpoints along the border of Tajikistan. Out of them 17 are located on the border with Uzbekistan, 5 – on the border with Kyrgyzstan, 2 on the border with Islamic Republic of Afghanistan and 1 – on the border with China.

15) The purpose of formation of international transport corridors on the territory of the Republic of Tajikistan is to increase the efficiency of foreign trade and transit traffic and guarantee its transportation based on international treaties and agreements that strengthen economic security of states.

Transit corridors and intermodal (multimodal) routes through Tajikistan provide a link for CIS countries with Northern Afghanistan, Pakistan, India, China as well as with the Persian Gulf countries and countries of this region.

International transportation of goods mainly passes through 12 checkpoints where goods are inspected and registered.

Various barriers have negative impact on market of road transport services and international road transport. As a result there is a limited access to market, increased cost of good delivery, increased delivery terms, reduced efficiency of road transportation and, ultimately, reduced competitiveness of foreign trade goods.

Newly introduced forms of customs documentation, registration of goods and vehicles significantly reduced the time of customs procedures, especially for transit goods. The procedures for heavy motor trucks moving under TIR Carnet have also been simplified. Pre-processing of information and e-document system has been introduced by border management and customs agencies for the information submitted in advance.

The dominant kind of transport for conveyance passengers and freights outside the country is the railway transportation. The analysis shows that 25.9 percent of all international passenger traffic is carried by road, 32.0 percent by railways and 40.9 percent by air. International freight transportation is mainly carried by railways (95.9 percent) and motor trucks (3.5 percent). Long distance transportation, 1421 km on average is the ideal distance for railway transportation and the railways will likely retain its dominant position in this field. An effective transportation system is an integral part of any economy. Geographical position of Tajikistan is favorable to make it as a bridge country between the East and South Asia (Islamic Republic of Afghanistan, Republic of China, Pakistan, India, Malaysia and Singapore) and countries in Central Asia, the CIS and South-West Asia.

Creation of free economic zones in Sogd and Khatlon Oblasts could facilitate economic activity of international corridors. Further optimization of material and information flows depending of situations on the markets and adequate provision of economic competitiveness of transport enterprises is possible based on improved communication and establishment of regional logistics systems covering the whole chain of physical distribution of freights with maximum effective communication between consignors and consignees.

#### 4. Subsector development program up to 2025

16) Based on the findings of the analysis of separate transportation subsectors in the country and tasks identified by National Development Strategy and other short-term and long-term programs of social and economic development of the country and with the purpose of achievement of the main objective – to take out the country from communication deadlock and its transformation into the transit country in the region, National earmarked program for transport sector development of the Republic was developed for specific periods: short-term up to 2015, medium-term up to 2020 and long –term period up to 2025.

##### 1. Development of motor transport

17) In the short term perspective, public investments will be directed on purchasing of buses and trolleybuses for city of Dushanbe and Oblast centers. Private entrepreneurs will be involved based on soft lending mainly for interurban and international transportation of passengers and cargoes, as well as for local transportations by small buses.

During this period, it is provided to establish the national network of logistics service in urban, regional and district centers, and international logistics centers in such cities as: Vahdat,

Khujand and Nizhny Panj. Construction of border check point terminals is planned to be built during the 2012-2014 period.

In the medium term it is supposed to create trolleybus parks, traction substations and traction networks in the city of Kurgan-Tube and city of Kulyab as well as provide concessional loans to participants of international transportation to purchase vehicles that meet international standards.

Increase of the passenger flow and increase of population justify in the long-term run the necessity to provide in the towns located around the capital such as: Vakhdat, Tursun-Zade, Hissar and Somoni town in Rudaki as well as in Kurgan-Tube city and Sarband town trolleybus suburban line.

During this period as well as in the medium perspective it would be provided to allocate soft lending for purchase of vehicles for participants of international transportation, tentative amount of which is \$0,5 million US Dollars per year.

Investment schedule for the motor transport development program with identification of major activities is given in the following table:

Table 1

Program for development of motor transport of general use

(in million US Dollars)

№	Indicators	Timeframe				Executive body
		up to	up to	up to	Total	
		2015	2020	2025	:	
1	Project for development of public transportation of Dushanbe city	6.2	4.9		11.1	Executive government authorities of Dushanbe city
2	Establishment of logistics centers at the national level	1,5			1,5	Ministry of Transportation and Communication of the Republic of Tajikistan (MTC RT)
3	Construction of border terminals	15,0			15,0	MTC RT

4	Purchasing of transport for international transportation	1,5	2,5	3,0	7,0	Transporting companies and entities
5	Establishment of trolleybus depot, traction network and substations in KurganTube and Srband cities		11,0	4,0	15,0	Executive government authorities of KurganTube and Srband cities
6	Establishment of trolleybus depot, traction network and substations in Kulyab city		13,0	-	13,0	Executive government authorities of Kulyab city
7	Establishment of trolleybus depot, traction network and substations in Vakhdat and Tursun-Zade cities, Hissar rayon and Somoni village of the Rudaki Rayon		5,5	10,5	16,0	Executive government authorities of Vakhdat, Tursun-Zade cities, Hissar rayon and Somoni village of the Rudaki Rayon
Total	US Dollars	24,2	36,9	17,5	18,8	
	TJ Somoni	106,6	162,4	77,0	346,0	

## 2. Development of railway stations

18) Analysis of the situation in the sector shows that investments in road infrastructure would be more profitable than in other transport sector.

19) Implementation of individual restructuring plan of the Stat Unitary Enterprise “Rohi Ohani Tojikiston” would ensure real opportunity to attract private capital in different areas of railway transportation:

- replacement of sleepers and on this basis to ensure the safe movement of trains;
- replace all worn-out rails, switches and use the R-65 rails with long-lasting period of exploitation;
- upgrading the fleet of locomotives and waggonages;
- reconstruction of repair shops in order to reduce unnecessary costs associated with the use of wagons and locomotives;
- creation of necessary conditions for development of intermodal transportation.

During this period the detailed feasibility studies be carried out and financial justifications be provided for the construction of major rail networks: Kolkhozabad - Nizhniy Pyanj - the border of Afghanistan, Wahdat-Karamik (the border of Kyrgyzstan), Tajik railway connection (Ayvadh) through Afghanistan to the railroad of Turkmenistan and North-South line which ensure connection of the center of the Republic of Tajikistan with Sughd Oblsat.

20) In the short term period:

- the construction of the Wahdat-Javan site for the future railway from Dushanbe to Kurgan-Tube will continue;
- replacement of sleepers, ballast and tracks renewal will continue;
- some measure will be taken to repair and maintain around 150 bridges to prevent corrosion and avoid further destruction;
- 20 mainline and 9 shunting locomotives will be purchased;

21) In the medium term:

- works on replacing the sleepers, railway lines, with the focus on renewal of rails will continue;

- 55 bridges will be reconstructed;
- seven main railway locomotives will be purchased;
- freight wagons will be purchased and restored;
- construction of a railway-Karamyk-Vahdat (the border and Kolkhozabad-Nizhniy Panj-border with Islamic Republic of Afghanistan);

It is also envisaged that within this period from \$0.4mln. to \$0.5 mln. US Dollars will be allocated on an annual basis to subsidize suburban unprofitable railway communications.

22) In the long term period:

- works on the replacement of sleepers and rail tracks with renewal of rails will continue;
- 10 bridges will be rehabilitated-freight wagons will be fully renewed;
- locomotive depot will be modernized (renewed);
- construction of the railway “North – South” will be launched.

23) Subsidies to suburban unprofitable railway communications up to 2025 will amount on average \$0.6 million US Dollars per year.

Table 2

## Investments in development of railway transportation

(in million US Dollars)

№	Indicators	Timeframe				Executive body
		up to	up to	up to	Total:	
		2015	2020	2025		
1	Purchasing of locomotives	8,0	39,2	33,0	80,2	SUE “Rohi Ohani of Tajikistan”
2	Construction of the railway line from Vakhdat – Karamyk		660,0	825,0	1485,0	MTC RT
3	Purchasing of wagons	16,0	21,68	11,0	48,68	SUE “Rohi Ohani of Tajikistan”
4	Construction of the railway line Kolkhozobod – Nijnii Pjanj – border of IR of Afganistan		124,7		124,7	MTC RT
5	Construction of the railway line from Vakhdat – Yavan	180,0			180,0	MTC RT
6	Improvement of the track structure		30,0	27,0	57,0	SUE “Rohi Ohani of Tajikistan”
7	Rehabilitation and construction of bridges		7,5	9,0	16,5	SUE “Rohi Ohani of Tajikistan”
8	Construction of the railway N – S			3900,0	3900,0	MTC RT
Total	US Dollars	204,0	883,1	4805,0	5892,1	
	TJ Somoni	897,6	3885,2	21142,0	25924,8	



### 3. Development of civil aviation

24) Based on the analysis, as well as technical, financial and economic feasibility studies it is expected to take all measures necessary for the implementation of public investment in the Civil Aviation sector.

The restructuring and reform process in this area will continue together with strengthening of the regulatory framework and creation of the competitive environment for new market entrants.

25) In the short term period the construction of international terminal in the Dushanbe Airport will be completed. During this period, it is also planned to update the fleet and equipment of SUE "Tajik Air Navigation Services"

26) In the medium term privatization of the joint-stock companies in the civil aviation structure which carry out their activities, in a competitive environment is planned and no financial support is expected to be provided to these enterprises from the state budget from that moment. The subsidiaries such as ticket selling agencies, refueling company, catering company and hotel services will be privatized as well.

27) In the medium-term period implementation of the following investment projects is expected:

- construction of new control and dispatch center in Dushanbe city;
- rehabilitation of runway and taxiway in Kulyab Airport;

- extension of the runway of the Kurgan-Tube Airport for 800 meters, reconstruction of taxiways;

- reconstruction of the Kurgan-Tube International Airport.

28) The issue of subsidization of domestic flights will be addressed on a tender basis between all air service providers. Contracts will be awarded based on evaluation of benefits in the declared cost together with the required quality of service and subsidies requested in tender bids.

Air Traffic Control will remain as state owned enterprise but the fees to be charged for the services provided shall cover long-term costs.

29) In the long run (after 2019) it is planned to build the second runway in the Dushanbe Airport which will amount to \$40 million US Dollars.

Rehabilitation of local airports will be launched to use the small aircrafts. Use of aviation in agriculture and forestry management will be scaled up in the country.

30) Investments required for the development of civil aviation up to 2025 are given in the Table 3 below.

Table 3

Investments for development of civil aviation

(in mln.US Dollars)

№	Indicators	Timeframe				Executive body
		up to	up to	up to	Total:	
		2015	2020	2025		
1	Construction of the international terminal in Dushanbe Airport	32,47			32,47	JSC “International Airport of Dushanbe”
2	Purchasing of the aircrafts	27,5			27,5	JSC «Tajik Air», private airlines
3	Renewal of the air navigation equipment	20,0			20,0	SUE «Tajik Air Navigation Services»
4	Construction of Flight Control Center in the Airport of Kurgan-Tube and taxiway in Kulyab Airport		64,5		64,5	JSC «International airport Kurgan-Tube» and OAO «International airport of Kulyab»
5	Construction of the second runway in Dushanbe Airport			40,0	40,0	JSC «International Airport of Dushanbe»
6	Servicing of local airports			2,5	2,5	Executive government authorities of cities and rayons
7	Reconstruction and maintenance of bridges		3,0	3,0	6,0	
8	Reconstruction of the Airport of Kurgan-Tube city	50,0			50,0	JSC «International airport Kurgan-Tube»
Total	US Dollars	130,0	67,5	45,5	243,0	
	TJ Somoni	572,0	297,0	200,3	1069,2	

#### 4. Development of road networks

31) The analysis of the roads showed that approximately 75 percent of the national (republican) roads completely or partially lost its asphalt coating and from 60 to 80 percent of roads is not suitable for maintenance without significant rehabilitation. More than 48 percent of road network does not allow for increase of speed for more than 35km/hour. After rehabilitation it is expected that the network will have a capacity to service projected road traffic up to 2025.

In the short-term period the priority will be given to investments for rehabilitation of the international road Vahdat-Dangara, which includes the construction of a Chormagzak tunnel and because of the construction of Rogun dame, completion of 75 km. of replacing site between Obi Garm and Nurabad on the road: Dushanbe-Karamik (border with Kyrgyzstan), and continuation of projects on the sites: Dushanbe-Kulyab-KalaiKhum and Dushanbe-Tursun-Zade.

Rehabilitation of 166 bridges is also envisaged in this period and will totally amount to more than \$ 8 million US Dollars.

Under the medium term program (for 2014-2019) it is provided to attract investments for reconstruction and rehabilitation of international roads for 734 km and for \$161 million US Dollars.

In medium term it is also planned to rehabilitate medium and large bridges for \$ 6.5 million US Dollars.

During this period, out of the total amount (\$184.1 mln.US Dollars) to be spent for maintenance of roads \$128.87 million U.S. Dollars is planned to be spent for maintenance of international and national (republican) roads, \$55.23 million U.S. Dollars on local roads.

From 2015-2017 the Southern bypass road of Dushanbe city will be constructed with the length of 16.5 km. which will amount to \$ 26.4 million U.S. dollars and bypass of Khujand city for 16.4 million U.S. dollars in 2018-2019.

The important international roads on this site of the road are Isfara – border of Kyrgyz Republic (IR 15). Isfara- border of the Republic of Uzbekistan (IR 17) etc. Total costs for these

new projects with the total length of 1080.1 km are estimated at 238 million U.S. dollars. The expected economic return on investment is 17.9 percent.

In the long term, opportunities of the Government of the Republic of Tajikistan to allocate more funding for the implementation of rehabilitation programs will be much better. However, the concessional lending will still remain a major source of financing of these activities.

In the long-term period it is planned to carry out the rehabilitation of the bridges which will amount \$ 5.5 million U.S. Dollars.

During this period, it is envisaged to allocate \$274.2 million US Dollars for adequate maintenance of roads, including the maintenance of international and national roads (about \$192 million U.S. dollars), and maintenance of local roads (\$82.26 million US dollars). At the same periods it is planned to construct the proper road infrastructure facilities (e.g. refueling stations, service stations, stores, campgrounds and hotels), which would contribute to the improved transport services.

32) The generalized investment plan for construction, rehabilitation and maintenance of roads with the breakdown of the works to be performed is presented in the Table 4.

Table 4

Investment plan for rehabilitation and construction of the automobile roads up to 2025

(in million US Dollars)

№	Indicators	Timeframe					Executive body
			up to	up to	up to	Total:	
			2015	2020	2025		
1	Construction and rehabilitation of roads, including:	Km.	711,8	1312,1	2141,4	4165,3	MTC RT
		Amount	215,1	253,6	429,6	898,3	
2	International	Km.	609,3	734,0	1080,1	2423,4	MTC RT
		Amount	194,8	161,0	238,5	594,3	

3	National (Republican)	Km.	102,5	578,1	1061,3	1741,9	MTC RT
		Amount	20,2	92,0	191,2	303,4	
4	Construction and rehabilitation of bridges	m.	4854,0	6325,0	5786,0	16965,0	MTC RT
		Amount	8,1	6,6	5,5	20,2	
5	Investments on maintenance of automobile roads		63,5	166,8	287,4	517,7	MTC RT
Total	US Dollars		501,7	680,0	1152,2	2333,9	
	TJ Somoni		2209,0	2994,0	5073,0	10275,9	

Investment plan for separate sites of the roads is given in the Table 5 and for bridges in the Table 6 with detailed explanation of the site names and reconstruction timeframes.

Table 5

Investment program for motor road rehabilitation

Number and index of road	Road site	Length, in km	Total coast, in USD	Rehabilitation period
1	2	3	4	5
International Road (IR) 02	Dushanbe – Hissar	13,8	8 879 251	Short-term
	Hissar – border of Uzbekistan	42,4	27 281 178	Short-term
IR 04	Vakhdat – Nurek	43,0	11 383 863	Short-term
	Nurek – Dangara	53,0	9 907 661	Short-term
	Gulistan – Kulyab	35,0	6 642 095	Short-term
	Kulyab – Kalai-hum	168,1	40 390 059	Short-term
IR 09	Kizil-Kala – Kabodien	47,0	11 292 878	Short-term
IR 11	Kurgan-tube – Nijnii Pjanj	94,0	56 139 000	Short-term
IR 12	Ayni – Penjikent - border of Uzbekistan	113,0	22 000 648	Short-term

Republican Road (RR) 004	Pugus – Safedorak	18,3	3 682 465	Short-term
RR 014	Yang Shahr – Tandikul	22,0	2 549 470	Short-term
RR 018	256 km IR 07 – rayon center of Jirgital	4,0	463 540	Short-term
RR 019	259 km IR 07 – rayon center of Jirgital	2,0	231 770	Short-term
RR 020	Ljakhsh – Ljakhsh Airport	1,6	185 416	Short-term
RR 022	Vakhdad – Romit	37,0	7 283 672	Short-term
RR 048	Dushanbe – Hissar	17,6	3 355 493	Short-term
IR 03	Labi Jar – Kalai-hum	135,0	35 210 553	Medium-term
IR 04	Kalai-hum – Rushan	155,0	37 242 470	Medium-term
	Rushan – Horog	85,0	20 423 290	Medium-term
IR 08	Gulistan – Dusti	132,0	25 984 992	Medium-term
IR 09	Kabodien – Aivadj	85,0	12 020 955	Medium-term
IR 10	Aivadj - boRRer of Uzbekistan	33,0	4 949 730	Medium-term
IR 13	Kabodien – Spitamen	70,0	9 899 610	Medium-term
IR 16	Isfara – border of Kyrgyzstan	44,0	7 641 480	Medium-term
RR 001	Gushari – Khodja-Obigarm resort place	5,7	1 430 739,9	Medium-term
RR 003	Istravshan – Khavatag resort place	10,1	1 170 438,5	Medium-term
RR 005	Varzob HPP – Harangon	10,9	2 145 730	Medium-term
RR 007	Shakhrinav – Karatag resort place	3,4	394 009	Medium-term
RR 008	47 km IR 02 – Karatag	4,5	521 483	Medium-term
RR 012	14 km IR 02 – to Shambari resort place	8,3	961 846	Medium-term
RR 014	Yangi Shahr – Tandikul	22,0	2 549 470	Medium-term
RR 021	214 km IR 07 – rayon center of Tajikobod	16,7	3 287 495	Medium-term
RR 025	62 km IR 04 – Nurek	5,3	614 191	Medium-term
RR 026	Dangara. Kangurt – Baldjuvon, Khovaling	60,0	6 953 100	Medium-term
RR 027	Somoni – Olimtoi	9,8	1 135 673	Medium-term

RR 028	Nurishark – Somoni – Chorkul	29,9	3 464 962	Medium-term
RR 029	1 km IR 08 – rayon center of Mir Said Ali Khamodani	13,1	1 518 094	Medium-term
RR 030	Kurbonshakhid – Temurmaliq	21,0	4 133 976	Medium-term
RR 038	456 km IR 04 – Vanch	61,3	7 103 750	Medium-term
RR 040	39 km 06 – to Garmchashma resort place	6,2	1 220 507	Medium-term
RR 042	Dushanbe – Yavan – Abdurahmoni Jomi – Ujali	107,0	12 399 695	Medium-term
RD 043	Rudaki – crossroad Ljahur	11,6	1 344 266	Medium-term
RD 045	Rudaki – Shurtugai	80,9	12 138 883	Medium-term
RD 049	Dekhkan farm «Russia» Dekhkan farm «Guliston»	9,1	1 054 554	Medium-term
RR 051	Khodjamaston – Kizil Kala	13,5	1 564 448	Medium-term
RR 052	CJSC Tajikistan – Cyprus Kime	4,5	521 483	Medium-term
RR 059	Uzup - "Tigrovaja Balka" Reserve	32,5	4 876 560	Medium-term
RR 074	Kanibadam – Spitamen – Khudjand from Okten side	8,4	973 451	Medium-term
RR 084	Access road to Kanibadam railway station	7,1	822 862	Medium-term
RR 085	Access road to Kanibadam resort place	4,0	463 588	Medium-term
RR 086	Access road to Shaidon rayon center	11,3	1 309 647	Medium-term
RR 087	Access road to Ragun	10,7	2 832 729	Medium-term
RR 088	Proletarsk – Isfana	9,4	1 410 451	Medium-term
IR 04	Khorog – Tuzkul	185,0	31 776 155	Long-term
	Tuzkul – Murgab	126,0	30 274 524	Long-term
	Murgab – Kulma pass	90,0	21 624 660	Long-term
IR 06	Khorog – Ishkashim	105,0	26 225 010	Long-term
	Ishkashim – Tuzkul	210,5	52 574 901	Long-term
IR 09	Dushanbe – ObiKiik	44,6	6 005 033	Long-term
	ObiKiik – Kizil Kala	33,0	4 952 310	Long-term
IR 13	Spitamen - border of Uzbekistan	65,0	12 170 210	Long-term

IR 15	Isfara - border of Kyrgystan	10,0	1 968 560	Long-term
IR 17	Isfara - border of Uzbekistan	24,0	3 102 480	Long-term
RR 002	75 km IR 01 – Khoja Sangkhok	12,1	1 402 208,5	Long-term
RR 006	Shahrinav – Cheptura railway station	6,0	695 310	Long-term
RR 009	54 km IR 02 – 1 / Tursun-Zade	3,1	359 246	Long-term
RR 010	21 km IR 02 – Hissar	3,0	590 568	Long-term
RR 011	19 km IR 02 – Almasy	12,2	1 413 797	Long-term
RR 013	Pahtaabad – Tursun-Zade	2,8	324 478	Long-term
RR 016	Sari pul – Navabad	18,2	2 109 107	Long-term
RR 017	Hait – Nazarailok deposit	42,0	4 867 170	Long-term
RR 024	Chormagzak – Yavan	23,0	4 527 688	Long-term
RR 031	Temurmalik – Kangurt	27,0	5 315 112	Long-term
RR 032	Vose – Khovaling	86,0	16 929 616	Long-term
RR 033	Kulyab – Muminabad	41,8	8 228 581	Long-term
RR 034	Ziraki – Dahana	6,8	788 018	Long-term
RR 035	Access road to Kulyab airport	3,5	405 598	Long-term
RR 036	Tugorak. Sarichashma – Chordara, Shurobod	47,5	5 504 538	Long-term
RR 037	Kalahum – Airport Dashti Luch	6,9	799 607	Long-term
RR 039	609 km IR 04 – Porshnev v.	4,6	533 071	Long-term
RR 041	Khorog – Tukuzbulok	154,5	37 122 333	Long-term
RR 044	Dushanbe – Hissar	20,0	2 317 700	Long-term
RR 046	Ljahur crossroad	2,1	243 359	Long-term
RR 047	Nurek HPP – Karabulak	9,9	1 147 262	Long-term
RR 050	JSC Uljaboi – Dekhkan farm. Kiblai Rudaki	23,9	2 769 652	Long-term
RR 053	Kurgan-Tube Ring road	12,4	1 436 974	Long-term
RR 054	Kurgan-Tube – Dangara	71,6	14 094 890	Long-term
RR 055	Kurgan-Tube – Vakhsh	13,8	1 599 213	Long-term



RR 056	Access road to Kurgan-Tube railway station	0,9	104 297	Long-term
RR 057	Access road to Sarband	2,0	231 770	Long-term
RR 058	Access road to Kurgan-Tube	9,8	1 135 673	Long-term
RR 060	Jilikul – Garauti	9,2	1 066 142	Long-term
RR 061	Dusti - "Tigrovaja Balka" Reserve	5,7	660 550	Long-term
RR 062	J.Rumi - "Tigrovaja Balka" Reserve	10,4	1 205 214	Long-term
RR 063	Komsomol – Pakhtakor – Eshkhanova	8,4	973 451	Long-term
RR 065	Istravshan – Ganchi	12,6	1 460 176	Long-term
RR 066	Istravshan - Kurkag	32,1	3 720 005	Long-term
RR 067	Access road to Ganchi rayon center	16,4	4 341 752	Long-term
RR 068	Zafarabad – Bekabad	25,2	4 804 456	Long-term
RR 069	Khudjand – Gafurov	17,3	4 580 019	Long-term
RR 070	Gafurov – Pungan	137,2	24 392 514	Long-term
RR 071	Kanibadam – Isfara	27,0	5 315 112	Long-term
RR 072	Kanibadam – Ravat – border of Uzbekistan	12,0	1 390 644	Long-term
RR 073	Bulak – Chilmahram	11,0	1 274 757	Long-term
RR 075	Kanibadam – Spitamen Avchi-kalacha v.	13,6	1 576 063	Long-term
RR 076	Kanibadam – Spitamen Access road to Khudjand from Degmai side	8,4	973 459	Long-term
RR 078	Access road to Adrasman place, 28 km from Gafurov – Pungan automobile road	33,0	3 824 370	Long-term
RR 080	Access road to Shurab village	7,0	811 244	Long-term
RR 081	Kanibadam – Spitamen Access road to J.Rasulov rayon center	6,2	718 537	Long-term
RR 082	Access to Dushanbe – Khudjand automobile road	1,2	139 073	Long-term
Total for Republican roads		570,6	545 505 036	Long-term
Total for International roads		2 241,4	258 347 226	
Total			803 852 262	

Table 6

## Investment program for rehabilitation of bridges up to 2025

№ and Index of the road	Road site	Total of bridges		Rehabilitated in running meter	Cost per r.m. in USD	Total cost in thous. US Dollars
		in units	in running meter			
1	2	3	4	5	6	7
IR 02	Dushanbe – Tursun-Zade – border of Uzbekistan	16	468	200	3192	638.4
IR 04	Dushanbe – Kulyab – Khorog – border of China	91	3230	600	3192	1915.2
IR 11	Kyzyl Kala - Kurgan-Tube – Nijnii Pjanj	30	461	230	3192	734.2
IR 12	Ayni – Pendjikent –border of Uzbekistan	29	695	300	16000	4800.0
Total in short-term		166	4854	1330	-	8087.8
IR 03	Labi Jar – Kalai-hum	27	1750	1050	3192	3351.6
IR 04	Dushanbe – Kulyab – Khorog – border of China	91	3230	60	3192	2074.8
IR 08	Gulistan-Dusti	21	347	100	3192	319.2
IR 10	Aivadaj - border of Uzbekistan	1	12	12	3192	383
IR 13	Kanibadam – Spitamen – border of Uzbekistan	33	808	150	3192	478.8
IR 16	Isfara - border of Uzbekistan	10	178	90	3192	287.3
Total in medium-term		173	6325	2052	-	6550.0
IR 04	Dushanbe – Kulyab – Khorog – border of China	91	3230	600	3192	1915.2
IR 05	Murgab – Kyzyl Art – border of Kyrgyzstan	16	167	100	3192	319.2
IR 06	Khorog – Ishkashim – Tuzkul	63	536	270	3192	861.8
IR 09	Dushanbe – Aivadaj	34	1045	500	3192	1596.0
IR 13	Kanibadam – Spitamen – border of Uzbekistan	33	808	250	3192	798.0

Total in long-term	237	5786	1720	-	5490.2
Total for the program	576	16965	5102	-	20127.8

33) Under the framework of the Program for social and economic development of the cities and rayons it is provided to develop investment projects for rehabilitation of local roads, using foreign and local investments. In particular, the investment projects have been already developed for the rehabilitation of Taboshar-Zarnisor road with the length of 47 km. and for rehabilitation of intra-rayon roads of Baljuvan rayoun. These investment projects were submitted for consideration and investment attraction.

#### 5. Development of intermodal transportation

34) Intermodal transportation that meets the economic interests of customers through the integration and optimal use of resources and assets offered by each mode of transport becomes the important tool for promotion of trade between the continents. The volume of international cargo carried in containers, is tend to increase.

35) The main constrains that hamper the development of container transportation in the Republic of Tajikistan are as following:

- Inability to use the containers due to the lack of loading and unloading equipment for containers;
- Lack of consistent, i.e. conventions signed with neighboring countries that would permit the container transportation;
- Low volumes of returned goods;
- Inadequate proportion of valuable and perishable cargoes.

Therefore it is necessary to assist in the provision of short-term investments for purchasing of the appropriate equipment. Terminals of Dushanbe and Khujand cities shall be equipped with loading and unloading equipment, as well as container yards, where the intermodal transfers and gathering of goods with the necessary equipment will be made.

Most important in this regard is to promote freight forwarding companies which are operating multimodal and intermodal transportation. A special role in the development of intermodal and

multimodal transportation of goods will belong to the republic network of logistics centers in the cities of Tursunzade and Vahdat. Railway line “Vahdat-Javan” will connect the industrial areas. Special modern technical and production basis will be established for logistics handling of the goods in these centers.

In order to expedite the process of establishment of the logistics network for the management and storage of goods and placement of the staff it is assumed to use modern prefabricated modules. Collection and processing of operational information will be done by a single information system for monitoring and planning of export, import and transit operations through the territory of the Republic, including international transport corridors.

#### 5. Program to Ensure Environmental safety of the Transportation

37) Analysis of the overall situation in the republic demonstrated that the transportation makes significant contribution into pollution of the environment. Its impact is manifested, first of all, in pollution of atmosphere, surface and ground waters and soils. Transportation is one of the main sources of noise and heat pollution of the environment in the cities.

Total gross pollution of the atmosphere from vehicles is 43.5% of total pollution in the country.

In recent years, in order to reduce the pollution of atmosphere with exhaust of vehicles around the world, there is wide process implementation of the alternative types of fuel and, first of all, compressed natural gas, as well as of various additives to the petrol fuel.

In order to reduce the impact of negative factors on the environment in the conditions of growing motorization of the country and from contribution of other types of transportation, the Program stipulates implementation of a range of measures focused on significant reduction of those negative effects.

38) With regard to the protection of atmosphere, it includes:

- developing the highway network and improving the quality of their maintenance;
- transferring part of transportation to the use environmentally clean types of the motor fuel, first of all to natural gas;
- utilizing the equipment that reduces severe impact of the fuel on atmosphere;
- improving the road pavement structures by use polymers, technical rules and construction of highways;

- relocating the transit highways and the highways with cargo traffic away from residential areas;

- bringing the transportation infrastructure in compliance with international standards on environmental properties;

- Application of new types of mixtures and compounds in air conditioning systems and refrigerator carts to replace Freon;

- reequipping the fleet of aircrafts with planes of new generation and modernization of the air traffic organization system;

- Construction of noise reduction structures and green areas;

- creating the protective lanes on roadside areas along the highways.

39) With regard to protection of water resources, the program includes:

- creating modern carwash facilities at entrance points of the cities in the country for transit vehicles;

- Collection and disposal of the snow from city highways through introduction of snow melting plants equipped with waste water treatment facilities;

- developing the closed water supply systems for the enterprises railway card and locomotive depots;

- Introduction of circulated water supply, limiting the waste of drinking water in technological production processes of airports;

40) With regard to protection of soils and rational use of land resources, the Program includes:

- in order to exclude water logging of land, to conduct hydro-geological surveys during the design stage of works, as well as construction of viaducts and reservoirs (lakes) to collect and distribute the surface streams;

- in order to provide sanitary and environmental conditions of the transportation network, it is justified at the stage of selection of land plots to construct highways, to carry out selection of those land plots, which provide possibility to arrange protective landscaping works along the road shoulders;

- in order to exclude degrading (pollution) of the soils with chemical agents within the borderline of roadside lanes as a result of application of anti-icing agents, it is required to use compositions that do not have negative impact on natural facilities;

- introduce effective measures to prevent dirtying of railroad bed and attached territory;

41) In part of waste management:

- collection and utilization of vehicles thrown roadsides;

- cleaning of roadsides from solid wastes;

- organization of transportation of hazardous goods and wastes;

- equip bus stops with the containers for solid wastes;

- organization of collection and processing of vehicles subject to utilization;

- introducing complex technology for thermal neutralization and utilization of production, domestic and oily wastes of the airports.

42) Major activities of the program are presented in Table 8.

Table 8

Investment program on improvement of environmental impact of transportation

Activities		Financing in million US Dollars			
		Total	2009 – 2014	2015 – 2019	2020 - 2025
Automobile transportation					
1. Reduce emissions from stationary sources of transport enterprises	Enterprises	2,8	1,8	0,5	0,5
2. Construction of gas refueling stations to refuel vehicles with gas	Enterprises and individual persons	6,3	2,3	2,0	2,0

3. Transfer motor transport to use gas as a fuel	Automobile owners	3,8	1,8	1,0	1,0
4. Establishment of car washes at the city entrances	External (foreign) financing	2,6	0,2	1,2	1,2
5. Establish production on utilization (treatment) of automobiles and wastes from it operation	External (foreign) financing	6,3	2,3	4,0	-
6. Develop and implement project on reprocessing and recycling of motor oils and lubricants	External (foreign) financing	4,2	1,9	2,3	-
Total		26,0	10,3	11,0	4,7
Railway transportation					
1. Application of the new binary mixtures of freon 22 and 134 in air conditioners and refrigerator wagons instead of CFC-12	Own funds (50%) and External (foreign) financing (50%)	0,12	-	0,06	0,06
2. Application of water-soluble paints, water-based materials	Own funds (50%) and External (foreign) financing (50%)	0,34	-	0,14	0,2
3. Development of closed water supply systems for cars and the locomotive depot	Own funds (50%) and External (foreign) financing (50%)	0,26	0,08	0,08	0,1
Total		0,72	0,08	0,28	0,36
Air transportation					
1. Implementation of an integrated technology for thermal treatment and disposal of industrial, domestic and oily	Own funds (50%) and External (foreign) financing	4,8	-	2,2	2,6

wastes	(50%)				
2. Introduction of recycling water supply, limiting consumption of drinking water in production processes	Own funds (50%) and External (foreign) financing (50%)	0,34	0,08	0,18	0,08
Total		5,14	0,08	2,38	2,68
Automobile (motor) roads					
1. Create protective forest plantations at the roadsides along the roads (highways)	RT State Budget	Provided by the financing to be allocated for road maintenance			
2. Purchase and use of special antifreezing agents (compounds), which do not have adverse effects on environment	RT State Budget				
Total	US Dollars	31,86	10,46	13,66	7,74
	TJ Somoni	139,5	45,8	59,8	33,9

## 6. Transport Sector Information Program

43) The main goal of the Program is to improve the efficiency government regulation measures based on wide-scale use of information and communication technologies, to improve the safety level of the transportation sector based on obtaining complete, reliable and operational information about traffic situation, timely identification of negative trends and



making necessary arrangements to mitigate and address the consequences, systemic analysis of received information and developing strategic decisions.

Currently, there is a lack of the system of integrated complex independent system into single integrated database.

The single information system of promoting regulation in the transportation sector of the republic allows creating a single informational and analytical system for collection, consolidation and analysis of data on current tariffs, amounts of, as well as affordability of the transportation services for population.

Also, the Transportation Sector Information Program stipulates creating the single information system for monitoring and planning of the export, import and transit of goods into and through the territory of the Republic of Tajikistan, including those within the frame of international transportation corridors.

In ensuring transportation system with the sources of reliable and objective information the great importance is in use of modern methods of information analysis. Therefore, there will be Automated Management System (AMS-P) for passenger transportation of TSM type will be introduced, the operations of which are based on GLONASS System (Global Navigation System).

44) Use of GLONASS system provides the following advantages:

- Decrease in the number of vehicles required for transportation;
- Reduction in daily mileage of vehicles;
- Reduction of the general operation costs;
- Increase in the volume of passenger transportation;
- Regulation of private operators and widening of the taxation base;
- Decrease in the expenditure on management system;
- Collection of reliable information for transportation planning and development of urban infrastructure;
- Improvement in traffic safety.

Implementation of this transportation management system allows improving the comfort of the passenger transportation and reducing the time of waiting for passengers at bus stops and in vehicles to their destination and increase the transportation volume.

Currently, there is no any information available on the roads network, its equipment, conditions and technological properties of traffic.

45) Implementation of this goal is ensures by achieving the following objectives:

- creating highway information system;
- creating and maintaining the sector information resource on condition and functioning transportation sector, which is required to make strategic government decisions in the area transportation sector;
- organizing the monitoring after conditions and safety of the transportation sector functioning;
- creating structure of operational control over the performance of transportation operators (such as safety, regularity, etc.);
- creating the system of informational and technological cooperation of certain types of transport within the single transportation sector;
- creating a single informational cooperation space of the government authorities in the area of managing the transportation sector, entities and customers of the transportation services market.

46) Within this program, it is envisaged to implement the following arrangements (Table 9).

List of Arrangements of the Transportation Sector Information System

Name	Goal	Description	Amount (thousand USD)
1	2	3	4
Creating Highway Information System (CHIS)	<p>The main goal of CHIS is in providing the employees of the Ministry of Transportation of the Republic of Tajikistan of all levels with single and sustainable instrument promoting the performance of their duties:</p> <ul style="list-style-type: none"> <li>- Ensuring highway connection between the cities and villages inside the country and neighboring countries;</li> <li>- Improving, maintaining and expanding existing road network;</li> <li>- Conducting arrangements on traffic safety and environment condition management;</li> <li>- Implementing information technologies in construction, maintenance and work of MTC in road sector.</li> </ul>	<p>It is envisaged that completion of CHIS will provide access to the latest data of information system, such as:</p> <ul style="list-style-type: none"> <li>- Data on available quantity (roads, bridges and drainage structures);</li> <li>- Structure of road pavement;</li> <li>- Data on traffic range of axial load, data on accidents, and data on cost of the works on maintenance of highways, bridges and tunnels.</li> </ul>	2,567.0
Creating a single information system to support economic regulation in the transportation	<p>Improving the efficiency of the tariff and pricing and subsidizing policy based on:</p> <ul style="list-style-type: none"> <li>- Efficiency count and analysis of the existing tariffs on all types of transportation and affordability of</li> </ul>	<p>Creating the single information and analytical system will provide collection, consolidation and analysis of data on existing tariffs, amounts of subsidies, and services to population, modeling the impact of size tariffs, subsidies for</p>	207.7

<p>sector of the Republic of Tajikistan</p>	<p>transportation services for population, as well as the outcomes of financial and economic activities of the natural monopoly entities in transportation sector;</p> <p>-</p>	<p>development of the transportation services market. It is envisaged to carry out the following works within the frame of arrangement:</p> <ul style="list-style-type: none"> <li>- procurement of hardware and software, arrangement of automated workstations, collection, analysis and provision of information;</li> <li>- development of the model of economic regulation of the sector;</li> <li>- assessment of the impact of tariff policy on affordability of transportation services and development level of transportation services in various regions;</li> <li>- establishing the single information and analytical system for collection, consolidation and analysis of data on existing tariffs, volumes of subsidies, affordability of the transportation services for population.</li> </ul>	
<p>Creating a single informational system of monitoring and planning for import, export and transit transportation within the territory of the Republic of Tajikistan, including those within the frame of international transportation corridors</p>	<p>Developing the package of regulatory and organizational standards and single monitoring system of informational support for transportation of passengers and goods, including those through international transportation corridors, creating a single information system of planning and monitoring of export, import and transit transportations. The project represents a measure of government protectionism for development of the transportation services market based on creating the system logistical centers on international transportation corridors.</p>	<p>Developing the complex of regulatory and legal, as well as informational and technical documentation, the system of technical standards, agreements and guiding materials for organization, implementation and operation of the systems of informational support of the transportation process participants and their cooperation with the government bodies of various levels. Implementation of these measures requires:</p> <ul style="list-style-type: none"> <li>- developing, based on the analysis of existing legal and organizational documents of the concept of using the satellite navigation systems of GLONASS, GPS and</li> </ul>	<p>1086.0</p>

		<p>European system of GALILEO within the single network of the transportation sector of the Republic of Tajikistan;</p> <ul style="list-style-type: none"> <li>- creating a database on the infrastructure of international transportation corridors;</li> <li>- creating regulatory frame of data for transportation process shareholders;</li> <li>- creating the database of goods transportation participants;</li> <li>- developing a technology and standards of digital informational cooperation of the transportation process shareholders;</li> <li>- establishing the centers of operation management of transportation corridors and information service of the shareholders;</li> <li>- creating and probing the separate components of the information service structure</li> </ul>	
Implementation of AMST	Addressing the problem of designing the Program to develop a single schedule for the transporters of all forms of system providing collection, consolidation and analysis of the data on ownership and its further support.	It is envisaged to create a single information and analysis system ensuring the collection, consolidation and analysis of data on schedule and routes for transporters of all forms of ownership. Hardware and software is planned within the frame of arrangements, which are required for collection and analysis of the information and organizing the AWS of the employees responsible for collection, analysis and presentation of this information.	5770.0
Establishing the republican state information resource of the transportation sector of the	Developing the regulatory framework, organizational principles for functioning and creation of the informational and analytical center of the transportation sector that provides:	Developing the management models of the Ministry of Transport of the Republic of Tajikistan from the point of view of higher officials on decision making. Developing the methods for	

country	<ul style="list-style-type: none"> <li>- Informational support of the strategic government decision making in the transportation area;</li> <li>- Situational management of transportation sector based on utilization of modern information technologies;</li> <li>- Creating conditions for transition to information society in transportation sector.</li> </ul>	<p>implementation of the management models of transportation sector, creating the operational environment of management.</p> <p>This requires:</p> <ul style="list-style-type: none"> <li>- The study of legal and organizational issues and use of state informational resource of the transportation sector;</li> <li>- Development of solutions on technological support of the project;</li> <li>- Creating the infrastructure and system support of the information center.</li> </ul>	
Total		The presentation of arrangements will be implemented during the period till 2025 based on the public-private partnership.	10400.0

## 7. Mechanism for Implementation of the Program

47) The mechanism for implementation of the Program includes a system of arrangements that provides selection of participants, identification of funding sources and creating conditions for implementation of the most important projects envisaged by the Program.

One of the priority tasks of the program is the rational use of financial and other resources available at hand with the executive government bodies of cities and rayons, as well as attracting a growing scale of additional resources from private sector of economy.

The base of the program is supported by the principle of compliance of allocated resources, competence and area of responsibility of its participants.

The second principle is ensuring the efficiency of the use of the program resources based on widest application of market procedures and mechanisms for their management. This suggests the mandatory market assessment of the investment return, use of mechanisms ensuring competitive environment for the program participants and other procedures.

The third principle is wide usage of opportunities for joint financing of the projects and arrangements of the Program by shareholders. This principle suggests study and implementation of mechanisms and procedures ensuring agreed and responsible actions of the Project participants through whole cycle of the implementation of projects and arrangements.

The fourth principle is leading role of the government in creating general legal, informational and other conditions of the performance of the transportation sector. This stipulated the active role of the Ministry of Transport of the Republic of Tajikistan throughout the whole cycle of the implementation of perspective projects and arrangements.

48) The following sources will serve as a basis for implementation of the above mentioned principles:

- in the part of development of the air and railway transportation, full completion of implementing the Individual plan of the restructuring of the state enterprises performing activities in these sectors, and establishment of joint stock companies on their basis, achieving entrance of private companies into the service markets in these sectors, and in connection with this, ensuring transition to liberalization of the service markets of the sectors. This process will allow giving serious impetus to develop these sector from the account of including new forces of private entrepreneurs, promotes expansion of investment climate and improving the level of customer service in the sectors;

- in the part of development of the vehicular transportation, there will be a continuation of establishment of transportation enterprises and companies of various types, as well as their association, expansion of capabilities for strengthening the investment climate will be carried out based on provision of regulatory frameworks depending on the processes of implementing the new forces into the service markets basically by establishment of joint stock companies, joint ventures and the enterprises with combines form of ownership.

49) It is important to work out and widely use the public-private partnerships within the frame of the program. These new mechanisms of organizing the cooperation of the private business and government bodies are new for the republic and are presented to be quite perspective. These mechanisms suggest the parties making relevant commitments to promote reforms, to accomplish tasks related to improvement of the quality and other social problems. Meanwhile, the Government creates conditions and incentives for individual initiatives on solving these issues, and entrepreneurs look for opportunities to attract additional resources going above and beyond their direct contractual and commercial commitments for providing services to population.

50) The following funding sources will be used to raise funds:

- funding from the state budget within the limits envisioned for these purposes during the relevant fiscal years;

- Funds of the transportation sector enterprises;

- Investment loans and other attracted funds.

51) The main objectives for the implementation of the Program are:

- ensuring coordinated actions on implementation of the Program in accordance with the priorities of transportation strategy;

- preparing annual plans of implementation of the Program arrangements and control over their execution;

- attracting investors to implement attractive projects;

- ensuring efficient and purposeful use of budget funds and funds from non-budgetary sources in accordance with priorities set by the Program;

- implementing the mechanisms ensuring reduction of time and funds to obtain permits, agreements, expert conclusions and for making required decisions by various authorities and bodies of executive government during implementation of strategic projects;

- adjusting the program arrangements and program objectives in accordance with conditions for functioning of the economy of the Republic of Tajikistan approved by the Government of the Republic of Tajikistan with regard to the development of transportation sector.

52) Funding the development of standard and methodical, feasibility and scientific studies is planned to be provided from funds allocated from the budget of the Republic of Tajikistan, as well as with attracting funds from operator companies and their unions. In connection with the large number of facilities included into the program, the majority of calculation is done according to enlarged rates.

While planning the ratio of costs on infrastructure and carrying equipment according to conclusions and evaluations, this ratio should be 50%/50% for urban transportation; and 65%/35% for regional transportation, respectively.



Expenditure planned for the period of 2010-2025 on the Program in general is determined based on the GDP growth within range of 4-5 percent, including the growth of the transportation means for 6-7 percent.

53) The total amount of expenditure on implementation of the Program arrangements is 43662.2 million TJS (9920.9 million USD based on the exchange rate of the National Bank of 1 USD = 4.4 TJS), which includes 3565.1 million TJS from state budget funds (1824.2 million TJS from republican budget, 1705.1 million TJS from local budgets), 3449.9 million TJS from enterprises and 37196.7 million TJS of attracted funds.

Borrowed funds generally include concessional loans and grant funds. The concessional loans are payable during the period of 20 years with real interest rate of 1%.

Efficiency evaluation of the implementation of the Program arrangements for the purpose of their monitoring was conducted according to indicators of public, commercial and budgetary efficiency from the moment of its implementation.

The outcomes of the implementation of Program arrangements go beyond the solution of solely transportation problems. They will have a positive effect on not only performance indicators of the transportation system of the Republic of Tajikistan, but also on macro-economic indicators due to the multiplying effect of the implementation of the program arrangements. This will result in additional income of the regions from increase in the volume of industrial and agricultural production, other types of activities, and in improvement of social indicators, etc.

Providing the arrangements stipulated in the program with labor resources is envisaged from account of available contingency of workers on specific types of transportation.

54) The main growth comes on the highway system and the road service facilities, international transportation and railway transportation. A small growth of employment is expected in the internal air transportation as a result of lower levels of utilization of existing production facilities.

55) Consideration of environmental requirements and indicators of decrease in negative impact of the transportation facilities on environment was conducted at the stage of selection and justification of the program arrangements.

56) The key parameters of the social and economic efficiency of the program are creation of new jobs and reduction of traffic accidents.

The Program stipulates reduction in the number of traffic accidents. As a result of implementation of the Program it will be possible to prevent more than 10 thousand traffic accidents and to save about 2.3 thousand lives of people.