6 STRATEGIC CHALLENGES

6.1 Market Challenges

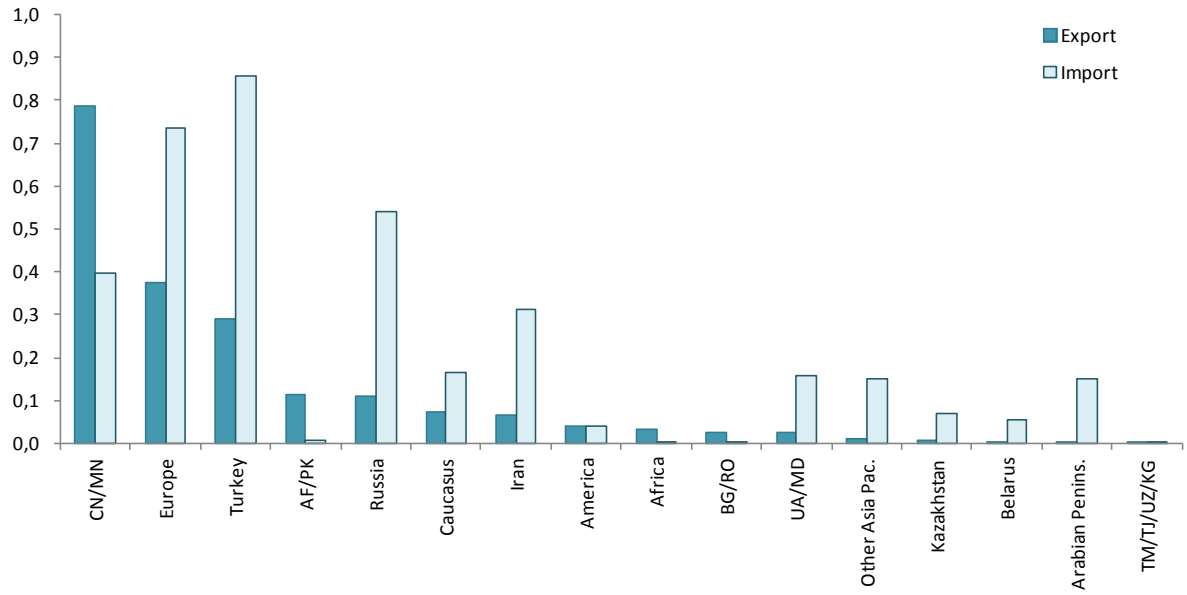
6.1.1 National Trade: Exports and Imports

World Trade Partners

Turkmenistan provides an access to Caspian Sea to a number of landlocked countries in Central Asia, which gives the country an undeniable advantage and prospects to enhance its role in regional and transit trade. Although official statistics for Turkmenistan is absent, it is possible to estimate its exports and imports based on figures reported by its trade partners. For the purpose of this analysis, it was decided to use UN Comtrade and Eurostat datas.

Reportedly Turkmenistan is a net importer (see Figure 2). In 2010 its import volumes equaled to 3.6 M euro (merchandise trade balanced at 1.68 M euro), out of which Turkey constituted 24%, Europe – 20%, Russia – 15%, China/Mongolia – 11% and Iran – 9%. Within the structure of exports 40% of goods were transported to China in 2010, 19% - to Europe and 15% to Turkey.

Figure 2: Turkmenistan Trade Partners, 2010, bn euros



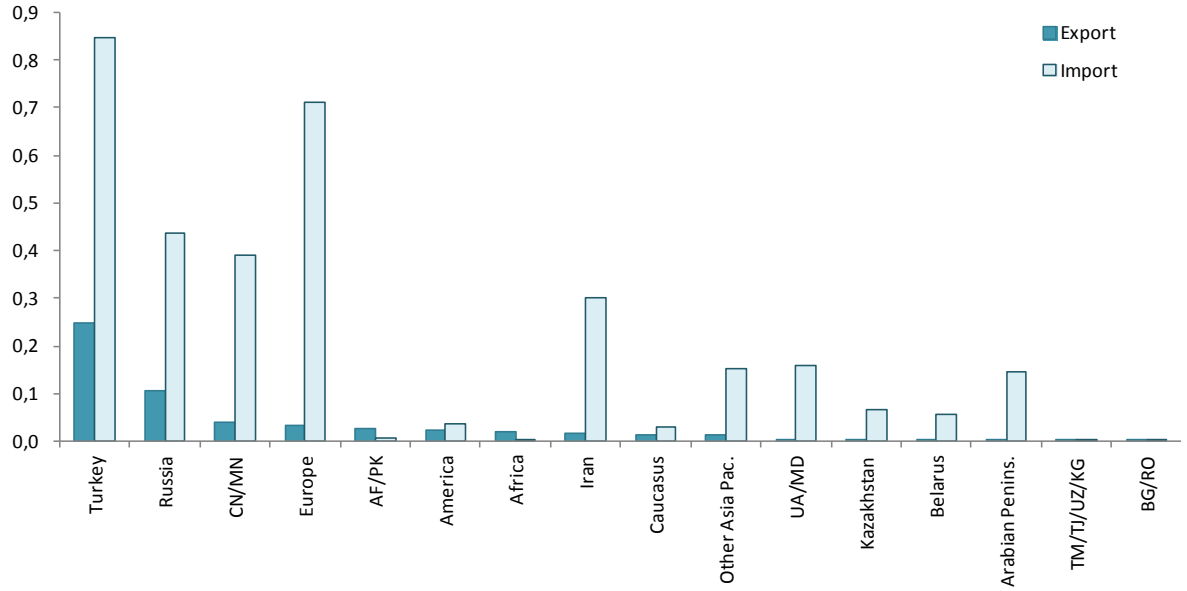
Source: Computation based on Eurostat and UN Comtrade databases

Leaving aside the analysis bulk cargo trade (see Figure 3), one could make a number of conclusions for the development of potential LOGMOS trade in Turkmenistan:

- general and containerizable cargo dominates Turkmenistan imports (almost 92%) and constitute slightly less than 25% of total Turkmenistan exports;
- in 2010 most of regional non-bulk trade of Turkmenistan resulted in negative merchandise trade balance;
- the most considerable inflow of non-bulk goods to Turkmenistan was due to Turkey (0.8 M euro), Europe (0.7 M euro), Russia (0.4 M euro), China (0.4 M euro) and Iran (0.2 M euro).

Provided the above mentioned pattern of direct trade in non-bulk cargo Turkmenistan could be classified as an important value attractor on TRACECA route.

Figure 3: Turkmenistan Trade Partners, Potential Trade, 2010, bn euros



Source: Computation based on Eurostat and UN Comtrade databases

Table 4: Distribution of Turkmenistan Potential Trade Partners, 2010, % in trade value

Zones	All products		Total all products	No min. fuel & ores		Total no min. fuel & ores
	Import	Export		Import	Export	
Afghanistan-Pakistan	6%	0%	2%	5%	0%	1%
Africa	2%	0%	1%	4%	0%	1%
America	2%	1%	1%	4%	1%	2%
Arabian Peninsula	0%	4%	3%	0%	4%	4%
Area Nes						
Belarus	0%	2%	1%	0%	2%	1%
Bulgaria-Romania	1%	0%	1%	0%	0%	0%
Caucasus	4%	5%	4%	2%	1%	1%
China-Mongolia	40%	11%	21%	7%	12%	11%
Europe	19%	20%	20%	6%	21%	19%
Iran	3%	9%	7%	3%	9%	8%
Kazakhstan	0%	2%	1%	1%	2%	2%
KY-TJ-UZ	0%	0%	0%	0%	0%	0%
Other Asia Pacific	1%	4%	3%	2%	5%	4%
Russia	6%	15%	12%	19%	13%	14%
Syria-Iraq						
Turkey	15%	24%	20%	45%	25%	28%
Ukraine-Moldova	1%	4%	3%	1%	5%	4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Computation based on Eurostat and UN Comtrade databases

To make the analysis complete, it is necessary to take into account the related tonnage of exported and imported goods from/to Turkmenistan (see Table 5 below). Figures show that:

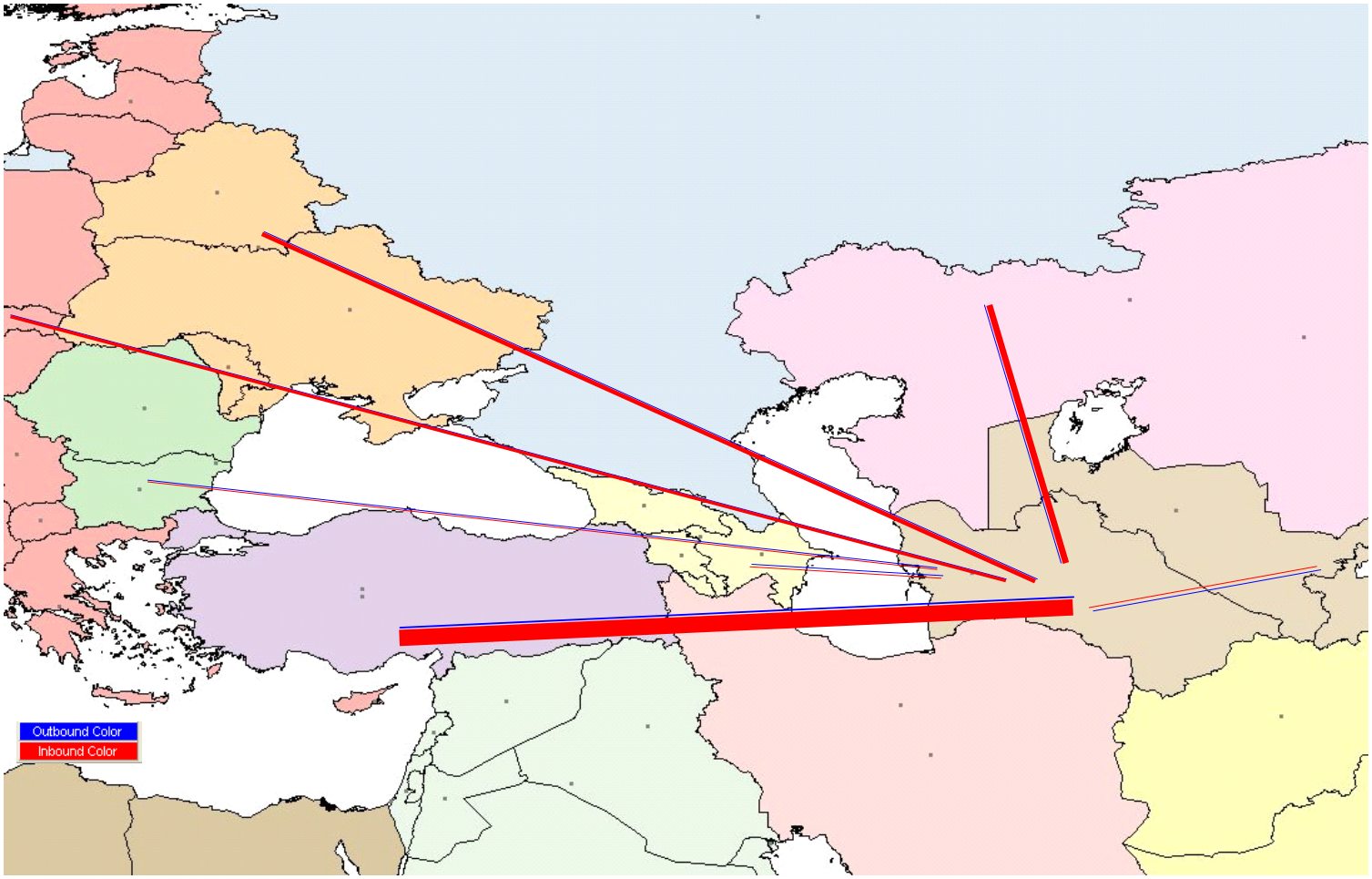
- the most significant trade exchange of Turkmenistan (more than 75% of exports and imports) is with Iran and Turkey (see Figure 4);
- the tonnage of exported and imported non-bulk goods is considerably unbalanced: potential exports constitute only 5% of related trade turnover. This implies that to realize existing potential in trading (partially and completely) containerizable goods, it will be necessary to attract westbound transit cargo to Turkmenistan.

Table 5: Turkmenistan Potential Trade with TRACECA Countries and Europe, 2010, in tons and %

Zones	Tonnage		Share in trade with TRACECA countries and Europe	
	Export	Import	Export	Import
Bulgaria-Romania	126.9	4 630.5	0%	0%
Caucasus	11 244.5	29 275.7	8%	1%
Europe	8 367.7	129 500	6%	5%
Kazakhstan	1 869.7	264 609.8	1%	11%
KY-TJ-UZ	825.2	1 154.1	1%	0%
Turkey	69 137.6	677 311.1	52%	27%
Ukraine-Moldova	2 085.9	175 346.9	2%	7%
Total	**132 758**	**2 499 530.4**	**100%**	**100%**

Source: Computation based on Eurostat and UN Comtrade databases

Figure 4: Turkmenistan Potential Trade with TRACECA Countries and Europe, 2010, in tons



Source: Computation based on Eurostat and UN Comtrade databases

6.1.2 Regional TRACECA Trade

The structure of potential LOGMOS trade of Turkmenistan with other TRACECA countries is considerably unbalanced. In 2010 imports from TRACECA to Turkmenistan dominated exports both in terms of value and volume of trade. It is estimated that in 2010 the volume of potential exports from Turkmenistan to TRACECA region equaled 0.5 M tones.

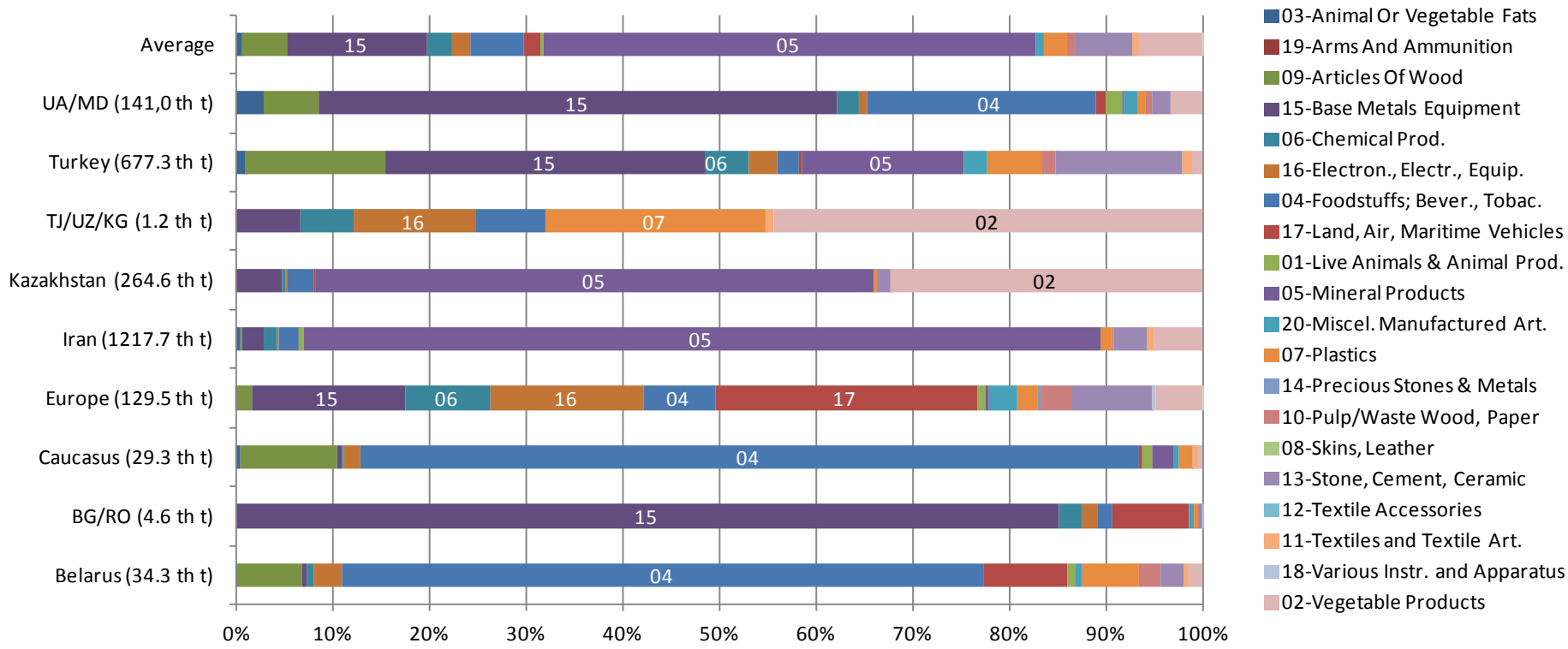
Within the structure of Turkmenistan imports non-bulk goods occupy more than 90% (see Figure 5 and Table 6 below) and cover the following categories:

- mineral products (51%), including salt, sulphur, etc., which are mainly imported from Iran, Kazakhstan and Turkey;
- base metals and equipment (15%) include iron and steel materials/articles imported from Turkey, Ukraine/Moldova, but also from Europe and Kazakhstan;
- vegetable products (7%) from Iran and Kazakhstan.
- construction materials (6%), including stone, plaster, lime, cement, etc.

The commodity structure of exports (see Figure 6 and Table 7 below) included three key broad categories of goods:

- textiles (56%) mainly consisting in cotton. Textiles constitute more than 90% of exports to Turkey;
- foodstuff, beverages, tobacco (26%) – fruits and vegetables, animal by-products and fodder, etc. This group of products prevails in exports to Iran (87%); and
- plastics (10%) namely destined to Caucasus and to a lesser extent to Belarus, Kazakhstan and Central Asia.

Figure 5: Potential Trade with TRACECA Region – Commodity Structure of Imports to Turkmenistan, 2010, in tons and %



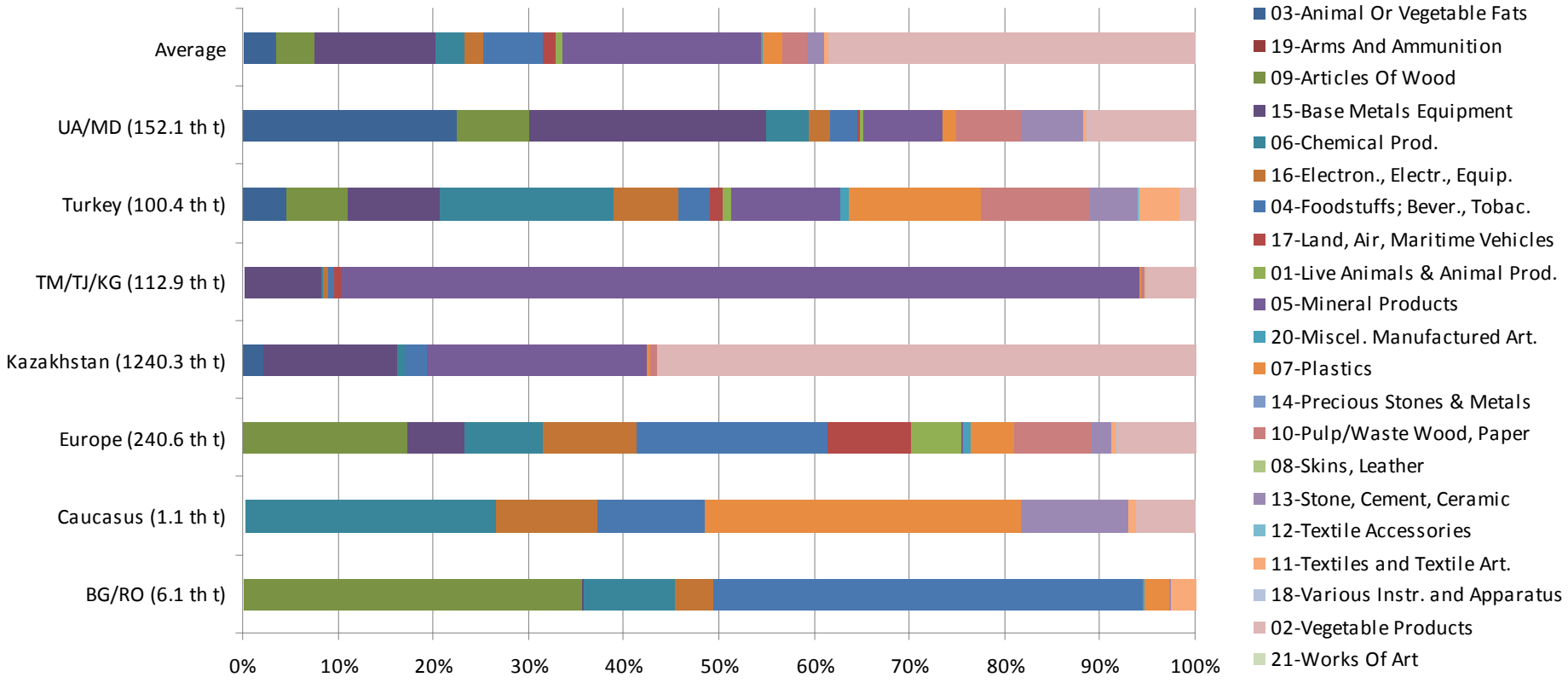
Source: Computation based on Eurostat and UN Comtrade databases

Table 6: Potential Trade with TRACECA Region – Commodity Structure of Imports to Turkmenistan, 2010, in tons

Commodity Groups	Bulgaria-Romania	Caucasus	Europe	Kazakhstan	KY-TJ-UZ	Turkey	Ukraine-Moldova
Animal Or Vegetable Fats	n/a	158.2	29.5	n/a	n/a	6 574.6	4 101.7
Arms And Ammunition	n/a	n/a	27.0	n/a	n/a	0.0	n/a
Articles Of Wood	n/a	2 910.3	2 077.8	0.3	n/a	98 544.0	8 046.8
Base Metals Equipment	3 943.5	162.3	20 503.5	12 459.2	77.2	223 677.2	75 568.1
Chemical Prod.	108.6	57.7	11 544.9	1 201.3	64.0	30 173.0	3 095.1
Electron., Electr., Equip.	71.0	474.8	20 413.8	500.5	144.0	20 440.0	1 385.4
Foodstuffs; Bever., Tobac.	79.0	23 573.9	9 599.7	6 971.8	85.4	14 993.2	33 180.8
Land, Air, Maritime Vehicles	364.5	131.2	35 062.3	696.9	n/a	1 924.6	1 405.9
Live Animals & Animal Prod.	n/a	283.1	1 292.7	85.4	n/a	578.0	2 630.6
Mineral Products	n/a	649.2	279.1	152 812.7	n/a	112 670.3	210.7
Miscel. Manufactured Art.	24.8	173.2	3 962.4	20.7	n/a	17 030.7	1 924.2
Plastics	17.0	379.7	2 678.4	672.0	261.1	38 578.9	1 158.1
Precious Stones & Metals	n/a	8.8	275.9	n/a	n/a	2.0	1.2
Pulp/Waste Wood, Paper	2.0	2.4	4 365.4	127.7	0.2	8 830.7	1 017.8
Skins, Leather	n/a	n/a	3.7	0.0	0.0	26.4	0.1
Stone, Cement, Ceramic	20.0	25.1	10 630.4	3 466.6	n/a	88 727.3	2 612.7
Textile Accessories	0.0	0.1	16.8	0.2	n/a	304.4	2.9
Textiles and Textile Art.	0.0	136.9	116.3	9.4	11.3	6 932.6	117.4
Various Instr. and Apparatus	0.1	1.2	237.0	46.5	n/a	88.3	20.3
Vegetable Products	n/a	147.6	6 381.9	85 538.5	511.0	7 215.0	4 545.6
Works Of Art	n/a	n/a	1.5	n/a	n/a	0.0	n/a
Total imports	**4 630.5**	**29 275.7**	**129 500.0**	**264 609.8**	**1 154.1**	**677 311.1**	**141 025.5**

Source: Computation based on Eurostat and UN Comtrade databases

Figure 6: Potential Trade with TRACECA Region – Commodity Structure of Exports from Turkmenistan, 2010, in tons and %



Source: Computation based on Eurostat and UN Comtrade databases

Table 7: Potential Trade with TRACECA Region – Commodity Structure of Exports from Turkmenistan, 2010, in tons

Commodity Groups	Bulgaria-Romania	Caucasus	Europe	Kazakhstan	KY-TJ-UZ	Turkey	Ukraine-Moldova
Animal Or Vegetable Fats	n/a	n/a	n/a	n/a	401.8	n/a	n/a
Arms And Ammunition	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Articles Of Wood	n/a	n/a	n/a	n/a	n/a	2.5	n/a
Base Metals Equipment	n/a	n/a	11.2	41.0	n/a	12.6	2.3
Chemical Prod.	n/a	117.5	20.3	56.7	1.7	3.1	582.7
Electron., Electr., Equip.	n/a	0.1	86.7	71.0	n/a	77.6	1.8
Foodstuffs; Bever., Tobac.	n/a	n/a	2.6	n/a	n/a	n/a	n/a
Land, Air, Maritime Vehicles	n/a	n/a	3.7	3.7	n/a	9.3	n/a
Live Animals & Animal Prod.	n/a	2.4	n/a	n/a	n/a	174.7	n/a
Mineral Products	n/a	4 491.5	n/a	37.1	127.5	n/a	n/a
Miscel. Manufactured Art.	n/a	0.1	4.9	15.9	n/a	0.1	0.6
Plastics	n/a	6 374.7	3.6	939.3	294.2	4 762.8	114.4
Precious Stones & Metals	n/a	n/a	0.0	0.0	n/a	n/a	n/a
Pulp/Waste Wood, Paper	n/a	n/a	0.3	n/a	n/a	n/a	0.0
Skins, Leather	n/a	n/a	n/a	n/a	n/a	688.1	n/a
Stone, Cement, Ceramic	n/a	n/a	0.1	n/a	n/a	54.9	2.1
Textile Accessories	n/a	0.0	0.2	n/a	n/a	n/a	n/a
Textiles and Textile Art.	126.9	106.8	8 105.7	4.9	n/a	63 327.2	687.2
Various Instr. and Apparatus	n/a	n/a	0.5	3.1	n/a	0.1	0.0
Vegetable Products	n/a	151.4	127.9	697.0	n/a	24.6	11.2
Works Of Art	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total exports	**126.9**	**11 244.5**	**8 367.7**	**1 869.7**	**825.2**	**69 137.6**	**1 402.2**

Source: Computation based on Eurostat and UN Comtrade databases

Based on above observations, it can be concluded that:

- the trade of Turkmenistan in non-bulk goods (potential trade), is extremely unbalanced. Potential exports constitute only minor share (5%) in potential trade turnover;
- non-bulk goods are rather imported to Turkmenistan from Europe, Turkey and other important origins outside of TRACECA region. This makes Turkmenistan a key attractor of potential trade in East TRACECA;
- more than 90% of potential exports from Turkmenistan include completely containerizable goods. At current stage this volume of trade (about 0.5 mln tones) is not enough to develop a sustainable container service over the Caspian. This could happen only if long-distance westbound containerizable traffic, e.g., from China/Mongolia could be attracted;
- therefore, in the mid-term perspective there is an opportunity for developing Ro-Ro service between Turkmenistan and TRACECA region, covering Caucasus, Turkey and Europe as a key service region.

6.2 Intermodal Maritime Based Transport Challenges

LOGMOS aiming at developing seamless door-to-door intermodal services, all components of the transport chain may be considered as possible segments of LOGMOS projects, depending on their relevance for potential LOGMoS trade flows.

Port interfaces for operations, services, procedures etc. between land and sea are among the most critical points.

6.2.1 Port System and Maritime Links

Turkmenbashi port is a key point on the way to and from several central Asian countries and on the strategic TRACECA transport route at the end of a Trans-Caspian railway line. The port is connected to the railway and road systems which are reaching the main locations of the country.

The dynamic development of maritime transport has been observed. 9 vessesls belonging to the maritime fleet of Turkemnistan include 4 bulk carriers with the cargo carrying capacity of more than 13 thousand tons, and 5 river-sea oil carrier vessels with the total capacity of 23,6 thousand tons.

In the context of the growing role of the Europe – Caucasus – Asia corridor, the importance of the Turkmenbashi Sea Port has also been significantly increasing. Therefore, it is planned to launch the construction of additional berthing and ship repair facilities, and create a logistics center. Furthermore, oil carriers, Ro-Pax and passenger ships will be purchased. The port of Turkmenbashi intends to develop into the largest port in the Caspian basin.

The Turkmenbashi International Sea Port located at the crossing point of cargo traffic flows following the routes from Europe to Asia and from Asia to Europe serves as one of the so-called “sea gates” of Central Asia. As part of the trade route Europe – Caucasus – Asia (TRACECA) the port plays an important part in geopolitics of Eurasia.

Export and import goods, transit cargoes, and goods of national economic significance are transported via the port of Turkmenbashi.

Increasing traffic flows of miscellaneous goods demonstrate the scale of industrialisation of the national economy.

Establishment of a competitive maritime fleet in line with the international standards is meant to strengthen the position of Turkmenistan in international transport.

Location

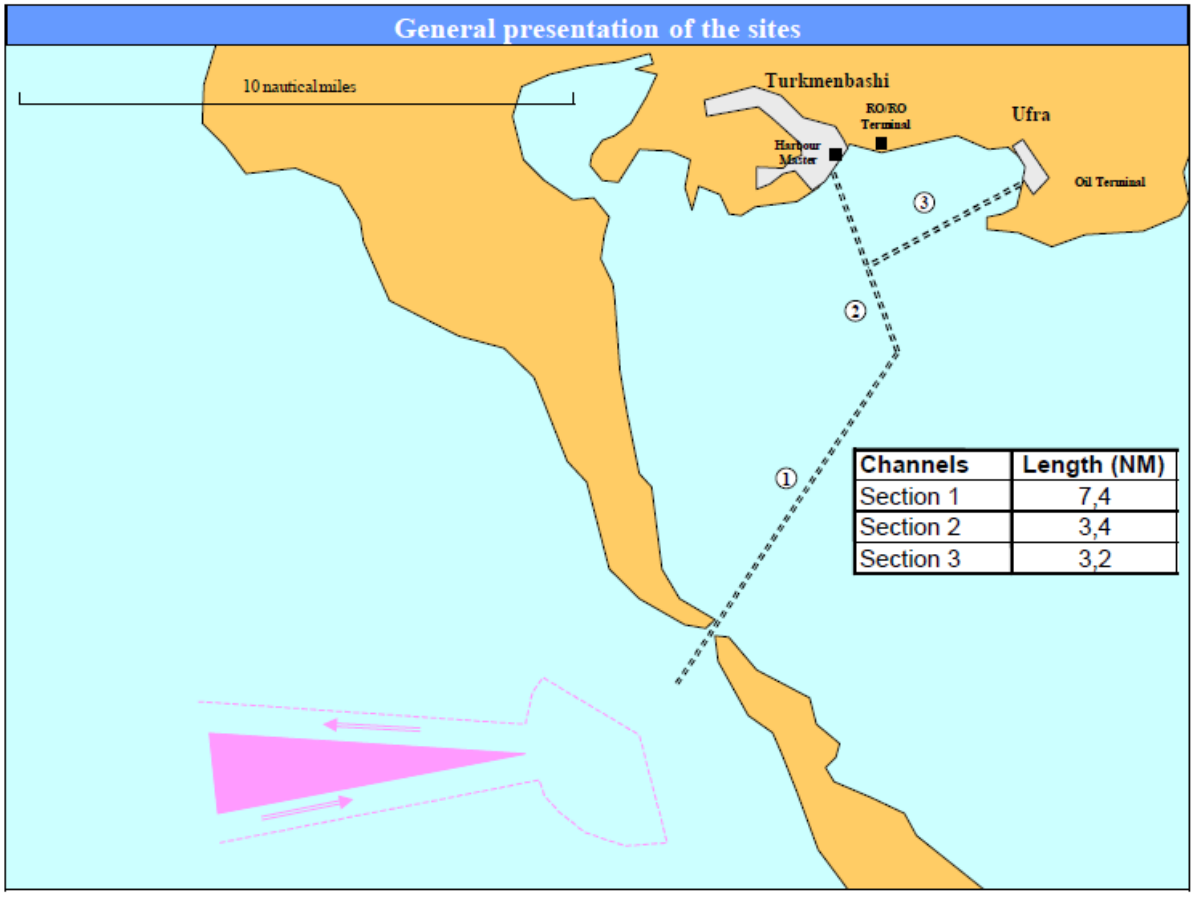
The port of Turkmenbashi is located 270 km east of Baku, at a short distance from the Western coast of the Caspian Sea, and approximately 550 km from the capital of the country, Ashgabat. The two cities are linked together by roads and railway lines.

Infrastructure

The 22-km, 140 to 200 m wide, one-track access channel has been last dredged in 1968 and as a result of siltation the maximum acceptable draft has been decreased to 5,1 m.

This halved the lifting capacity of the 12,000 Dwt tankers and hampered moves with the rail ferries under windy conditions. In 2012, the navigation channel was entirely modernized with new light buoy of international standard with AIS system (Automatic Identification System) enabling vessel moves at night.

Figure 7: Map of Turkmenbashi and Ufra Port Accesses



Source: EGIS / BCEOM

There are two bulk-oil piers at the nearby UFRA terminal on the Eastern side of the bay.

The 1963-built double 2-railtrack ramp cargo ferry terminal (PPK2) used for the handling of both wagons and trucks is occupying 41.7 hectares. This includes the parking area for outgoing trucks and the maritime station for ferry passengers. There is a customs post in the maritime station, in charge of the ferry freight + pax traffic only. The gates from the parking area into the terminal are equipped with scanning equipment for the trucks. The landward ramp has been

rehabilitated through an EBRD loan; the seaward ramp should be repaired in the near future through a WB loan.

From the ramps, the rail tracks lead to a marshalling yard located half a kilometer away behind the dry cargo port. The marshalling yard is in poor condition and only part of the original 12-track network is operational.

The underground electric cable network having been flooded due to the rise of the Caspian Sea level, the once automatic points are now operated manually. The main road from the port entrance to the truck parking area and rail ferry terminal has been up-graded in 2010-2011 and now a 500 truck parking-slot is available. The main railtrack to the ferry ramps has also been revamped. 2 additional separate road accesses leading from the port directly to the Ashkhabad highway are planned/under construction.

A new building is under construction for the Customs and other Governmental Agencies to implement a one-stop shop for border-crossing procedures.

The port also consists of a strong 430-m general/dry 3-berth cargo facility (PPK1) designed for the handling of very heavy lifts.

The port equipment includes 11 berth cranes of 6 to 100 T, 3 Liebherr mobile crane including one of 150-200 T and 2 of 64 T (installed in October 2012), 2 top loaders of 35 T lifting capacity plus a number of tug masters and mafi-trailers.

Besides, the port fleet was expanded, and such equipment as KAMAZ and MAZ, mobile complex for oil spill response on KAMAZ chassis 43114 (6x600), mobile multicomputer diving system on KAMAZ chassis 43118 (6x6), vacuum truck KO-505A on KAMAZ chassis 53215 (6x4), tank capacity of 10 cubic metric with the vacuum pump, Mobile mechanical repair truck, repair car on KAMAZ chassis 4308 (4x2) with special kitting, fire tanker AZ 5.0-40 (43253) on KAMAZ chassis 43253 (4x2), etc. was purchased.

Equipment and Other Facilities

There are 2 warehouses in the port, one of 5,000 sqm for general cargoes and another, dedicated for the storage of PE, measuring 12,000 sqm. Another 4,000 sqm area is allocated for the handling and storage of containers.

The cranes at the port railway station have a 5 T lifting capacity only. Therefore, upon discharging from the vessels, containers, which have to be dispatched inland by rail, are trucked to better geared private terminals where they are reloaded onto rail platforms.

The volume of containers and cargo remains very low compared to the potential of the Turkmen economy and it is made up in its vast majority of last voyage boxes. The reverse procedure applies for full export containers.

A significant quantity of oversized and heavy parcels shipped to Turkmenistan as well as other Central Asian Republics and mainly destined to the oil and gas industry are moving via Turkmenbashi. Users however complain that the afore-mentioned port means are not enough equipped and powerful for the sizeable quantity of super-OOG/very heavy lifts imported at Turkmenbashi and at times additional lifting gears have to be brought from other locations around the Caspian.

Maritime Services

The main maritime link is the ferry service linking Baku and Turkmenbashi, established in 1905 and now provided by CASPAR, the Azerbaijan state-run shipping company.

In the Caspian CASPAR deploys in total 7 x 28 wagon (over 30 year-old) and 2 x 52 wagon (new) ferries and (also rather old and technically out-dated) 2 x 33 trailer capacity Ro-Ro[1]. The bigger type may alternatively accommodate 58 x 16 m trailers (and up to 200 pax if no IMO/oil products on board).

Vessels are loading wagons as well as trucks and few containers (on platforms). The Baku-Turkmenbashi line represents about 50% of the railferry/Ro-Ro general cargo trade carried by CASPAR in the Caspian Sea. The schedule of this service is not regular along the liner service standard terms, owing mainly to waiting times for loading wagons back from Turkmenbashi to Baku, which seemingly is due to the late arrival of the wagons, delays at the marshalling yard and lengthy export customs inspections. Vessel delays at Turkmenbashi road+berth average 3 up to 5 days. Besides, the first priority given by CASPAR to the rail traffic heavily penalizes the road traffic and results in waiting times of up to 10 days for the trucks on both sides of the Caspian Sea.

Other shipping links include Russian voyage-chartered sea-river vessels and Iranian coasters of Khazar Shipping Company, plying irregular services to and from Iran (Anzali, Amirabad) and Russia (Astrakhan, Olya), and ferries carrying LNG to and from Makhachkala (Russia).

Inland Waterways

The inland waterways system in Turkmenistan comprises the Amu Darya River between the Afghan border and Turkmenabat and a 450 km section upstream from the Caspian of the 1,400 km Karakum Canal, which is mainly designed for irrigation purpose. These are of no economic importance and relevance for the transport industry.

General Development Plan of Turkmenbashi International Sea Port and the Merchant Fleet of Turkmenistan until 2020

Forecasting a high and long term national economic growth and the development of maritime transport in the Caspian Sea, The State Service of Maritime and River Transportation of Turkmenistan adopted in a presidential decree of June 8th 2011 a General Development plan of Turkmenbashi International Sea Port and the merchant fleet of Turkmenistan until 2020.

The objective of such plan is to create a modern port and maritime fleet responding to international standards which would enable to sustain and improve the increasing economic potential of the country by offering better service and develop the maritime infrastructure of the international Turkmenbashi seaport.

Consequently, an international tender for design and construction of the international auto-passenger sea terminal, container terminal, shipyard, terminal general cargo, bulk cargo terminal, a terminal for receiving vessel with deadweight of 5000 tons for shipment polypropylene production and reconstruction of the left ramp existing railway ferry terminal was announced on August 17th, 2012.

The plan aims also at obtaining independence from foreign maritime companies. According to national statistics, in 2010, only 17% of oil products were exported by national vessels. Turkmenistan does not possess the adequate transport infrastructure to master its maritime trade. Throughout this plan, it is therefore sought to lower the transport costs Turkmenistan is exposed to.

The measures included in the General Development plan are scattered from 2012 to 2020. They include the acquisition of 6 oil tankers (5 of which were already purchased and already in operation by October 2012), 1 vessel for LPG transportation, 2 passenger-and-truck ferries, 4 tugs, one crane vessel. In that sense, an international tender for the purchase of 4 tugs and the

[1] An additional 5 railferries of 54 wagon capacity are an order with the Uljanik shipyard at Pula (Croatia).

design and construction of buildings and facilities for salvage, rescue and underwater technical operations with acquisition of environmental equipment and appropriate vessels was announced on July 31st 2012. Furthermore, in 2012 a contract with the Croatian shipyard «ULJANIK brodogragiliste» was signed for the construction and delivery of a trucks (53 units) and passengers (200) carrier. By October 2012, the construction had already begun.

The 6 new oil tankers will allow to control 50% of the total export. Oil tankers will follow the following selected route:

- Turkmenbashi – Makhachkala
- Turkmenbashi – Baku
- Turkmenbashi – Neka/Enzeli/Nowshahr

The purchase of one LPG carrier vessel is expected to boost the export and master 88% of national production. The calculated benefit is 4 M USD.

Betting on a high development of the Awaza touristic zone, the strategy also plans to purchase 2 truck ferries for passenger and road transport. Proposed routes according to Japanese and Korean led pre-feasibility studies for this today non existing service are:

- Turkmenbashi – Baku – Enzeli
- Turkmenbashi – Aktau – Astrakhan

It is also ambitioned to acquire 4 supply vessel for oil platforms in the Caspian Sea as today this service is ensured only by foreign companies.

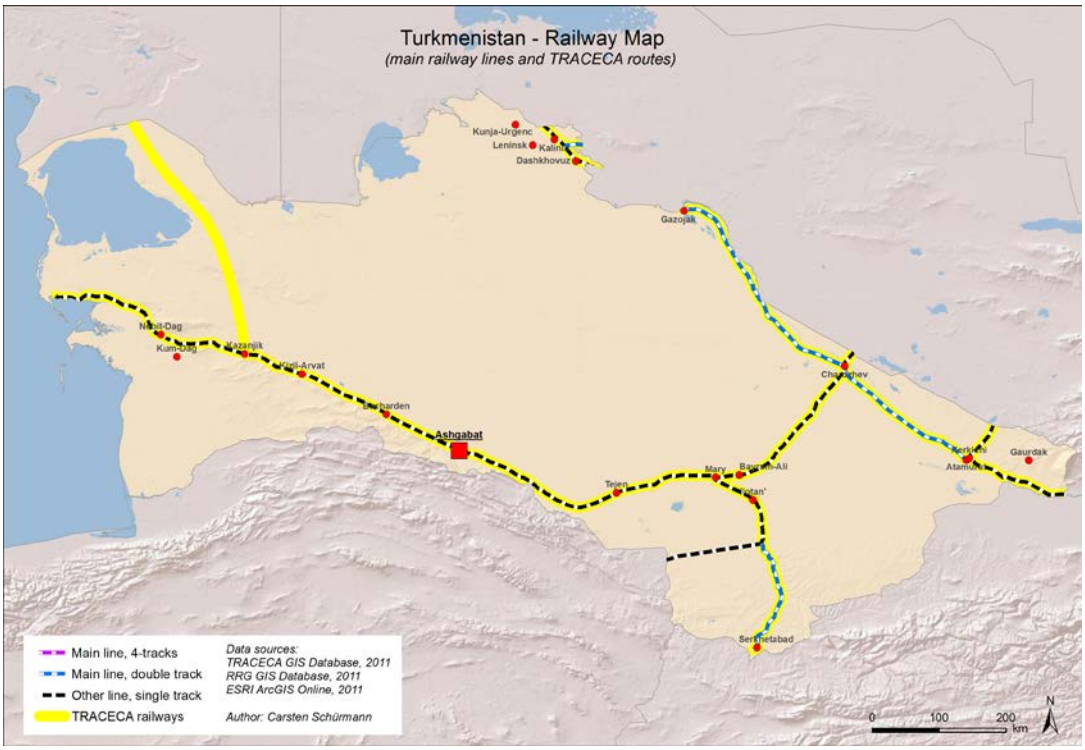
Table 8: Acquisitions Planned in the General Development Plan of the Merchant Fleet

	2012 - 2015	2016 - 2020	TOTAL
Tankers	4	2	6
LPG Transportation tanker		1	1
Truck-passenger ferry	1	1	2
Supply vessel	2	2	4
Crane Barge		1	1
Dredger	1		1

Source: General Development Plan of the Marine Merchant Fleet of Turkmenistan until 2020.

6.2.2 Inland Transport Mode: Railways

Figure 8: Turkmenistan Railway Map



Source: TRACECA (2011)

The Ministry of Railway Transport of Turkmenistan operates the railway network. On the basis of the Law "On Railway Transport" and its Statute, the Ministry of Railway Transport remains the main provider of railway transportation services in the country.

The ministry makes it uncertain to establish commercial relations due to its bureaucratic structure, but an in-depth reform of the management system is going on.

The network comprises almost 3,000 km of lines out of which about 900 km were constructed since the independence in 1991. All lines are single track and not electrified.

Table 9: Main Features of Turkmenistan Railway Network

Total route length (km)	Gauge (mm)
2,980	1,520
Electrified lines (km)	**Electrification system**
0	-

The main route is the 1,141 km Trans-Caspian line linking the port of Turkmenbashi, the capital Ashgabat and Turkmenabat near the border with Uzbekistan on the TRACECA route.

There is a branch line from Mary to Gushgy on the Afghan frontier, and another branch connects this line to the Iranian network at Serakhs.

The Tedzhen-Serakhs-Mashad line with five new railway stations and extension up to 308 kilometres is in operation since 1996 and it is becoming a vital link between the Central Asian, Russian and European railroad systems and South Asia and the Persian Gulf.

The construction of the 203 km Turkmenabat-Atamyrat track was completed. This branch line connects five regional centres of the Lebap area with the city of Turkmenabat and in 1999 with the capital Ashgabat. After the construction of the bridge with parallel highway and railway, the new 215 km branch line Turkmenabat-Atamyrat-Kerikichi is becoming a core of the Central Asian transport system.

The 540 km North-South TransKarakum railway Ashgabat-Karakumy-Dashoguz across the Karakum desert operated since 2006 halves the transit between two of the largest areas of the country - Akhal and Dashoguz.

Serakhs is the rail crossing point with Iran where wagons are switched from the broad to the standard gauge. Gypchak railway station (7 km from Ashgabat) handles 40' containers and it is an important point for the dispatch of containers all over Turkmenistan.

Turkmenistan launched the construction of its portion of the international Uzen – Gyzylgaya – Bereket – Etrek – Gorgan line, passing through Kazakhstan, Turkmenistan, and Iran at the end of 2007. Over 700 km of this 900-km line pass through Turkmenistan. The Asian Development Bank agreed to co-finance the project (75% of project cost) and provided a 125-M-USD loan to Turkmenistan for 25 years with a 5-year grace period. It is expected that by 2016 the capacity of the rail line will reach 10 M Tons. The project is today completed.

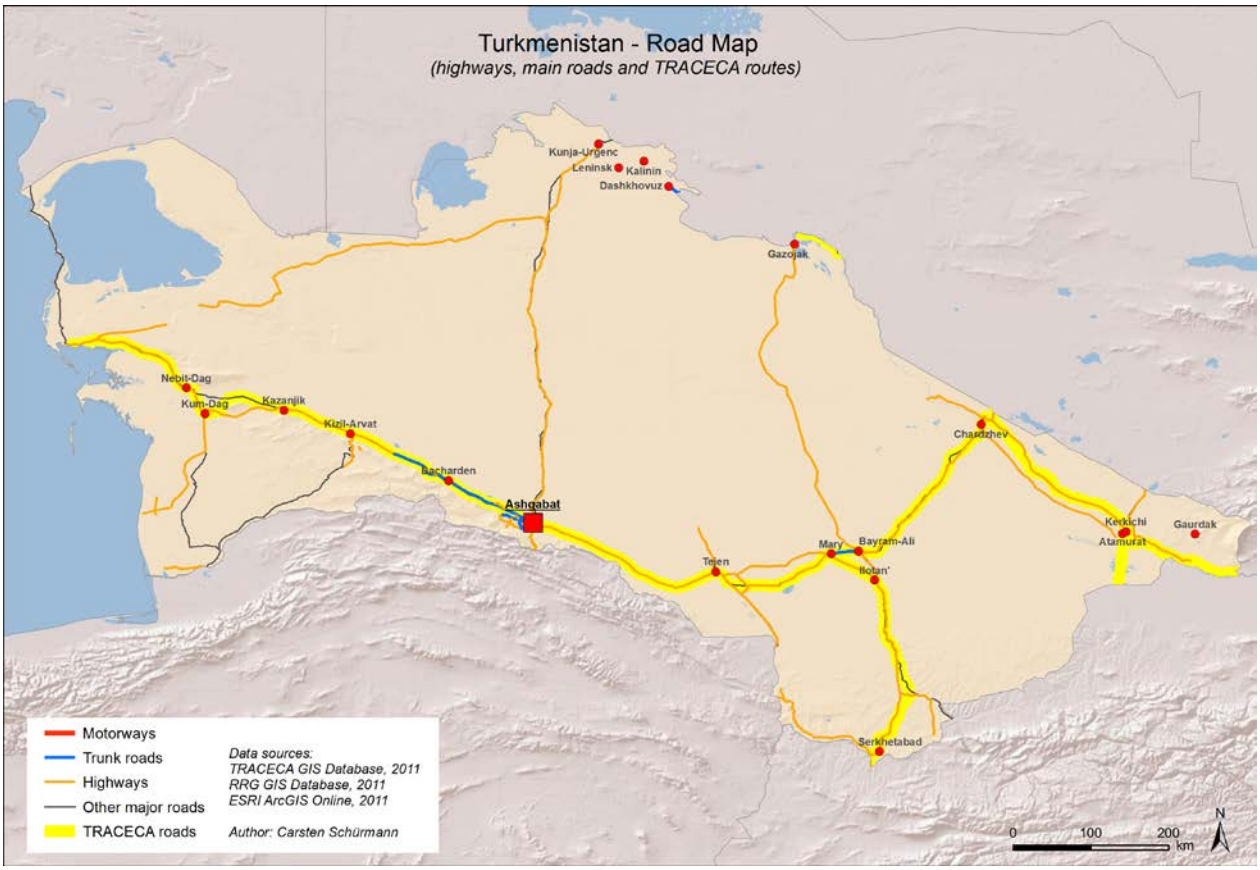
As in most CIS countries the investment needs to renew and modernize rolling stocks have been much delayed and are suffering from a general shortage. There are plans to purchase 200 new locomotives as well as a number of railcars, but a plan to fit platforms for the rail transport of containers was still at the time of writing.

The Master Plan for railway transport for the period 2012-2016 foresees national investments in the following projects:

- Construction of the railway lines Atamyrat-Imamnazar and Gazachak-Shasenem-Dashoguz.
- The continuation of the "North-South" corridor from border of Kazakhstan to Iran border with the construction of new stations and the acquisition of locomotives.
- The construction of a rail Bridge over the Amur Darya as part of the Turmenabat-Farat line.
- The construction of HSP rail lines between Turkmenbashi city and Balkan Province and Turkmenabat city to Lebap Province.
- Train management single center in Ashgabat.
- Autoblock system and electric centralization including power supply and controllers for the section of railway "Bereket-Gyzylkaya-Uzen".

6.2.3 Inland Transport Mode: Roads

Figure 9: Turkmenistan Road Map



Source: TRACECA (2011)

Road is the main transport mode in Turkmenistan.

The total length of the road network of Turkmenistan is 24 000 km (18.2% of which are unpaved). The road density equals 49.2 km per sq km, which is somewhat high considering that 90% of the territory of Turkmenistan is covered by deserts. The key Asian highways pass through the territory of Turkmenistan (AH5, AH70, AH75, AH77, AH78) with a total length of 2 204 km.

Most paved ways have 2 or more lanes. The main "E" European roads crossing Turkmenistan are:

- E40 (Dasoguz)
- E121 (border of Kazakhstan – Turkmenbashi – border of Iran)
- E60 (Turkmenbashi - Gyzylarbat – Ashgabat – Tedjen – Mary – Chardzhu)
- E03 (Uzber border – Dasoguz – Ashgabat – Gaudan)

The maximum size and weight of vehicles traveling through the territory are: 4 m in height, 18 m length for trailer, 20 m for truck + trailer, and 24 m for road train, 2.5 m in width, 6.9 t per axle and 38 t in total weight. The maximum speed on key motorways (category I) 90 km / hour for freight vehicles.

The following highways are under construction currently:

- Ashgabat-Turkmenbashi (574 km)
- Ashgabat-Mary (352 km)
- Mary-Turkmenabat (255 km)
- Turkmenabat-Farab (36 km)
- Ashgabat-Karakumy-Dashoguz (546 km)

The planned reconstruction of old and new construction for 2010 – 2020 are:

- Ashgabat by-pass
- The reconstruction of Turkmenbashi – Ashgabat – Farab (1500 km)
- Serdar-Etrek-Gudriolum (265 km),
- Turkmenbashi-Bekdash-Kazakhstan border (240 km)
- Mary-Serkhetabat (330 km)
- Tedzhen-Serakhs (107 km)
- Turkmenbashi-Kizylkaya-Dashoguz (526 km)
- Gudriolum-Gumdag (315 km)
- Turkmenabat-Gerogly-Dashoguz (510 km).

It is planned to upgrade some road sections to the first category increasing the maximum design speed to 120 km / hour. For instance, the Ashgabat – Turkmenabad road section (600 km) should be upgraded into a 6-lane road with elevated segments and interchanges.

Delivery by truck to Kazakhstan via Bekdash (in the north-west) is limited due to the very poor road condition, but there is a rehabilitation plan.

The most important project is the reconstruction of the pontoon bridge across the Amu Darya at Farab leading to Uzbekistan and further to Kazakhstan. As much as 2,500 000 t cargos are transiting there every year in Turkmen, Turkish, Iranian, and Russian, Kazakh or even Afghan and Pakistani trucks.

The building and reconstruction of highways in Turkmenistan is under the management and control of the State business concern «Turkmenavtoyollary».

Main Features of the Existing Transport Service

Owing to its geographical location, Turkmenistan is a most important link on the TRACECA route between Europe, Central Asia and further China. Crossing the Caspian Sea from Baku (and in the future from Alyat) to Turkmenbashi and back saves 1,400 km of driving through Iran (at an estimated 600 USD of fuel cost, notwithstanding other transit expenses in Iran) and is by far the shortest and cheapest way for trucks from Turkey and Caucasus into Central Asia. Likewise Turkmenbashi is the entry point of the main railroad network into Uzbekistan and further Kazakhstan, all other landlocked ‘stan’ countries and China.

The maritime service between Baku and Turkmenbashi is therefore of paramount importance for the TRACECA program as a whole.

The present offer by CASPAR, the National shipping line of Azerbaijan, is far from meeting users’ expectations for reasons seemingly connected with the modus operandi at Turkmenbashi port. Apart from the technical problems identified above in this report, the main bottleneck for the railferry operation is the poor coordination between the various governmental transport agencies.

The Turkmen government intends to acquire two new ferries which should improve the frequency, space availability and regularity of the sailings for the road traffic.

Further, the combination of the following weaknesses has a very negative impact on the container trade via Turkmenbashi and entails its deviation by sea to Bandar-Abbas and, from there, through one of the four road crossing points disseminated along the border and into Turkmenistan by truck:

- inadequate shipping services (at least regular, if not by specialized vessels) from/to Turkmenbashi,
- inadequate handling equipment at the Turkmenbashi Port Railway Station,
- shortage of fitting platforms,
- lengthy traditional administrative and commercial procedures as well as regulatory set-up (railways and consignee liability regime as well as the railway consignment note),
- heavy delays resulting from the above in delivering imported cargo to consignees, as well as in returning empty equipment back to shipping lines and, in both cases, subsequent heavy additional demurrage and other expenses.

The following other non-physical issues have to be addressed at the same time:

- Handling tariffs for containers have to be adjusted and simplified in order users may be quoted 'flat' rates. The Turkmenbashi Port is aware about this problem and ready to tackle it in order to increase the flow of TRACECA cargo through their facility;
- Rules of customs' clearance, cargo and container documentation have to be revised in order to decrease costs, speed up cargo delivery and facilitate the trade.

6.3 Trade and Transit Facilitation

6.3.1 General Presentation

- **Procedures and formalities** are among the **main barriers** that are hampering the development of Motorways of the Sea:
  - several **border points** must be crossed, mostly in ports but also on land routes e.g. along the central land corridors: minimum 2 points in a single / one sea service, up to 5 points in inter-seas services linking western Black Sea Countries and Eastern Caspian Sea Countries, and possibly more in the case of longer multicountry transit and transshipments trades;
  - several physical mode transfers, handling movements and intermediate storage are taking place along the sea based transport chains: commonly 3 transfers and minimum 6 handling plus 2 storage in the case of a single sea leg, and several more handling operations in the inter-seas services
  - previous and ongoing experiences of Motorways of the Sea in other regions as well as the global worldwide transport system of containers have demonstrated that the resolution of difficulties in this field is an essential success factor.
- The procedural process in ports and at other border crossing point are **dominantly related to Trade Laws and Regulations**, but actors of the transport and transit chain are responsible for their fulfilment. A significant part of their activities is to deal with these complex issues and they are drawing the corresponding revenues out of their capacities.

Relationships between institutions on one side, - Customs first, but also other Ministries and inspection bodies - operators and users on the other side, are affected by these functions which are mixing with the physical transit and transport operations.

- The **impacts of administrative and regulatory barriers** are generally more important when there is a sea leg since:
  - maritime transport and port transits require more formalities than land transport modes, including specific exchange of information, paper documentation etc. which are rightly perceived as a factor of complexity
  - this adds to the weakness of intermodal sea based transport, particularly when compared to the most simple unimodal road transport
  - transit times are increased if and when formalities and operations are mismatching, e.g. when the transport means of one mode is not coordinated with those of the next mode, which is a frequent situation between the maritime and railways legs in the TRACECA Region
  - costs are not only direct but also indirect, and not only formal but also informal, and unofficial transit levies and other transaction costs are adding to the sum of official tariffs, taxes and dues.
- **Common Weaknesses / barriers** have been identified in all LOGMOS project Countries to various extents and at different degrees. This diagnosis has been shared under the key word "Facilitation" by Country stakeholders and at bilateral and regional levels. Barriers in this field are referred to in the "W" (Weaknesses) list of the various SWOT analyses summarized in the following project documents:
  - Country profiles, as synthesized hereafter
  - Presentations for workshops and meetings
- Among the **solutions** discussed in the diagnosis phase, the following is a series of common **recommendations and targets** that are partly implemented, planned, or contemplated for the future LOGMOS projects and more generally for the development of intermodal transport including port / border crossing points:
  - I.T. systems and solutions electronic solutions / EDI for:
    - information (for users and operators)
    - declarations
    - pre-alert (for Customs and other)
    - duties, taxes and fees
  - One stop shop scheme and extension to Single Window System (SWS)
  - Risk management system and methods
  - IT interchange solutions between MoS port / communities
  - Tracking and Tracing (in coordination with operators)
  - Upgrading / redesigning border points layouts
  - Training (management, IT organization…)

6.3.2 SWOT Analysis

The following table summarizes key-findings for national SWOT analysis in trade and transit facilitation procedures that have been adopted in Turkmenistan.

Table 10: SWOT Analysis in Trade and Transit Facilitation Procedures

STRENGHTS	• Membership in various regional and international organisations (CIS, ECO, IMO, OSJD, UNECE, UNESCAP) • Agreement on International Rail Freight Communications (using SMGS consignment note) • Counterpart of six UNECE transport conventions • Bilateral agreements regarding transport and customs issues with LOGMOS beneficiary countries • Numerous national projects on transport infrastructure improvement
WEAKNESSES (BARRIERS)	• Non-accession to the major international conventions and legal instruments • Perceived uncertainties with commitment to Customs and trade facilitation reform and modernization • Border crossing points not designed for high volume traffic flows, which does not facilitate selectivity based on electronic risk analysis by Customs and other border crossing agencies • Mistrust between Customs and trade facilitation agencies and private industry because of integrity issues and lack of complete Customs and trade facilitation • Heavy bureaucratic and time consuming documentation requirements • Absence of electronic pre alert import and export declaration
OPPORTUNITIES	• Start developing a trade and transit facilitation strategy • Increasing trade relations
THREATS	• Hesitance in joining international conventions on trade and transportations issues • Continued delays and costs owing to inconsistent Customs and other border crossing agency decisions and integrity issues • Delays in implementation of transit / transshipment procedural improvements in ports and inland border crossings