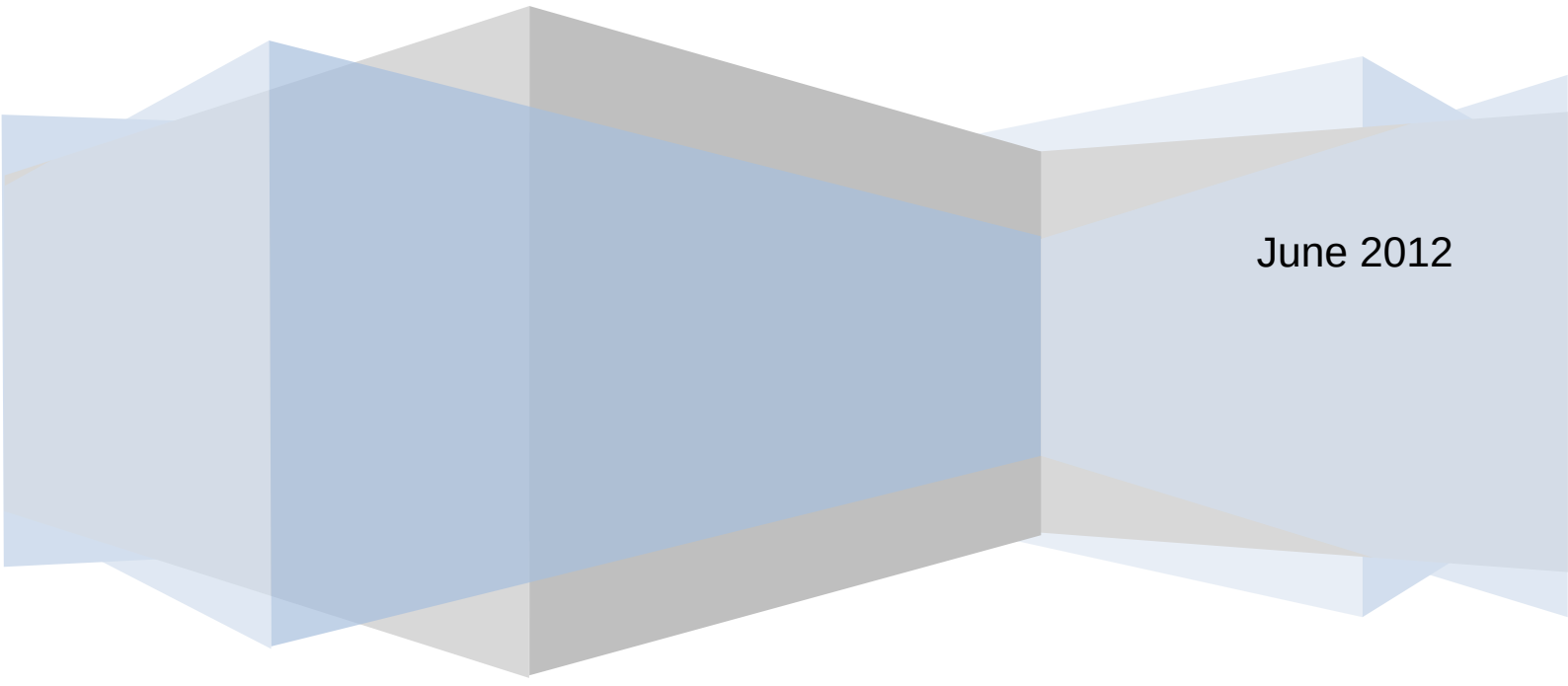
A report for the ECO Secretariat

ECO Railway Network Development Plan

CORRIDOR MANAGEMENT STUDIES FOR THE PROJECT MANAGEMENT UNIT (PMU) UNDER THE AEGIS OF THE JOINT ECO/IDB PROJECT ON IMPLEMENTATION OF THE TTFA

Professor Dimitrios Tsamboulas
Consultant



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1. INTRODUCTION

1.1 Background

The development of a reliable and efficient railway transport network in the ECO region is of high priority, and, hence, ECO has promoted intra-regional transport connections through the promotion of cost effective rail transport corridors. It has also contributed towards the implementation of the decisions of the Member States to ease development of efficient transit transport system in the region, focusing efforts on suggesting the improvement of the existing infrastructure to meet the new demands and challenges. One related study is the "Corridor Management Studies for the Project Management Unit (PMU) under the aegis of the Joint ECO/IDB Project on Implementation of the TTFA".

1.2 Scope of the Report

The "**ECO Railway Network Development Plan"** constitutes part of the "ECO Priority Road and Rail Routes and Infrastructure Projects" Study, prepared by the Consultant (Contract between the Economic Cooperation Organization (ECO) Secretariat and Dr. Dimitrios Tsamboulas-Consultant), and has the following main objectives:

1. Identifying the main rail transport corridors in the ECO Member States and the ECO general region for priority development and cooperation.
2. Identifying the priority rail transport infrastructure projects along the proposed ECO priority rail routes.
3. Develop an ECO Railway Network Investment Plan of priority on-going and/or planned rail transport infrastructure projects along the proposed ECO priority rail routes.

1.3 Report Outline

The structure of the report includes five Chapters, as per the following:

Chapter 2 presents a description of the data collection procedure followed for the purpose of the analysis.

Chapter 3 presents the methodology employed to identify the rail corridors in the ECO region for priority development, together with their detailed description.

Chapter 4 presents the development of the methodology for the identification of proposed rail projects and their prioritisation, the results of the prioritisation exercise and the investment and time plans of the priority on-going and/or planned rail transport infrastructure projects along the proposed ECO Priority Rail Routes.

Chapter 5 presents the Country Reports for each country participating in the study, detailing current conditions on rail transport infrastructure, as well as National Transport Plans and related recommendations.

Chapter 6 presents conclusions and related recommendations from the Consultant.

2. DATA COLLECTION

2.1 Introduction

The two key tasks of the study, that is, the identification of the main rail transport corridors in the ECO region for priority development and cooperation, as well as the identification of the priority transport infrastructure projects along the proposed routes, required foremost the input of each ECO Member country. To this end, the Consultant produced a set of documents for information collection, which were sent to National Experts of the ECO countries. These included the terms and conditions-terms of reference (ToR) - for the National Expert for the elaboration of the country report, together with predefined tables/ questionnaires for consolidating the required information. More specifically, the following documents were prepared and sent to the National Experts:

- ToR for National Experts for the preparation of country report on priority *rail* routes and status of *rail* transport infrastructure projects.
- Format for preparation of country report including a set of guidelines.

The above documents are presented in *Annex I*.

2.2 Part 1-ECO Rail Routes

The purpose of this part is to obtain a picture of the main transport rail routes/corridors within the ECO territory for priority development and cooperation, and, hence, the National Experts were asked to identify the key rail links and rail border crossings in the ECO territory, based on the following guidelines:

- Proposed links/routes should be of international importance for transport between the ECO countries
- Proposed links/routes should connect to the proposed ECO routes

In addition, for each proposed ECO Rail Route, the National Experts were asked to fill in a table, with data on the technical characteristics and performance of each rail link and related borders crossing points along the identified ECO Rail Routes.

2.3 Part 2-ECO rail transportation infrastructure projects

An integral part of the study is also the identification of the priority rail transport infrastructure projects, which are either planned for implementation or already under construction. To this end, the National Experts were asked to identify these along the proposed rail routes/corridors stipulated in the previous part. For each specified infrastructure priority project, the consultant prepared a template with the scope to consolidate, among, others, the necessary information to be used in the subsequent project prioritization exercise of the study, presented in Annex I.

In addition to the above information, the National Experts were asked to analyse the status of implementation of the rail transport infrastructure projects along the corridors and routes proposed, identify the barriers for effective funding/

implementation, as well as provide recommendations on potential sources of funding for the cases of projects with non-secured funding.

The information collected was summarized in a database, listing the rail infrastructure projects per country, together with key information regarding their location with regard to the identified routes, current status, start and end dates, cost and sources of financing, etc.

The completed templates sent by the National Experts are presented in Annex V, while the database is presented on a country-by-country basis in Annex II to this report.

2.4 Part 3-Country Reports

The National Experts were asked to prepare a short country report on the National Transport plans of their respective country until 2025.

3. IDENTIFICATION OF ECO PRIORITY RAIL ROUTES

3.1 Introduction

The objective of this chapter is the identification of the main rail transport corridors in the ECO region for priority development and cooperation. Initially, the methodology and related criteria, according to which the rail routes were selected, are presented, followed by a detailed description of the identified routes.

3.2 Methodology for identification of the main ECO Priority Rail Routes

The methodology, according to which the ECO Priority Rail Routes were identified, was based on the following:

- Analysis and evaluation of the ECO Member States National Experts input and replies to the questionnaires and country reports sent by the Consultant, indicating priority routes and infrastructure projects of strategic national and regional importance.
- Analysis and evaluation of existing transport corridors initiatives in the region including the Euro Asian Transport Linkages project of UNECE, Asian Highways of UNESCAP, the CAREC project of the Asian Development Bank and the TRACECA project.
- Consideration of ECO strategy and projects on corridors development so far, as well as strategic thoughts for the future.
- The Consultants' experience in the identification and prioritization of transport corridors in the region built from expertise acquired in related projects, such as the Euro-Asian Linkages[1], TEM and TER projects[2], etc.

Further to the above, the priority corridors were selected based on the following criteria:

- The prioritized corridors should be among the international recognized ones of UNECE and UNESCAP.
- They should cover all the ECO Member States, but also create all possibilities for facilitation of trade and transport in region.
- They should be extended routes of the Euro Asian ones, which would facilitate their further development.
- There should be consensus by neighbouring countries, indicating their readiness to contribute to their development.
- Ideally, selected routes should either be already operational, or be in an advanced state of "readiness" for operations. This "readiness" may be considered from both a technical perspective and from the perspective of political willingness.

In addition to the above, the structure of each route/corridor identified includes the following elements:

[1] http://www.unece.org/trans/main/eatl.html
[2] http://www.unece.org/trans/main/temtermp/about.htm

- **ECO Main Route:** Key rail corridor traversing ECO Member States only.
- **Extension:** Segment with point of origin located on the ECO Main Route, traversing ECO Member States and ending in a node (city, port) *within* the territory of an ECO Member State.
- **Branch:** Segment with point of origin located on the ECO Main Route, traversing ECO Member States and ending in a *border crossing* with a non-ECO Member State neighbouring country.

3.3 ECO Rail Routes

In total, five priority Rail Routes were identified in the region. A short description of the routes is provided in the following, while Tables 3.1-3.6 list the identified routes in detail, primarily on country-to-country basis, and secondarily on a node-to-node (city-to-city) basis within the territory of each ECO Member State.

The five priority rail routes are depicted in Figures III1-6 in *Annex III*.

The **ECO Rail Route 1** illustrates the initiative-success story by the ECO secretariat regarding the development of a block train service along this route. It starts at the eastern borders of Turkey with Bulgaria and Greece, crosses Turkey through Istanbul, Ankara, as well as through the Lake Van by rail-ferry. It continues through the border crossing of Kapikoy onto Iran, crossing the Iranian territory through Aprin (near Tehran) and ending up at the border crossing with Pakistan (Mirjaveh). Finally, it follows a north-eastern direction through the Pakistani territory ending up in Islamabad.

The route has six extensions connecting the route with Iraq through Hamedan and Arak in Iran, and to India through Khokhropar, Armuka, and Wagah in Pakistan. A missing link is considered as an additional extension to the route, that is, the Rawalpindi-Havelian towards the border with China onto Khanjurab.

The route has the following nine branches:

- Three in Turkey, connecting the route with Samsun, Mersin, and Izmir ports.
- Two in Iran, connecting the route with Bandar e Abbas and Chabahar ports.
- Four in Pakistan, connecting the route with the cities of Jalal Abad and Kandahar in Afghanistan, as well as the two Pakistani ports Gwadar (missing link) and Karachi.

The route serves the connection of the ECO Member States Turkey, Iran, and Pakistan with extensions towards India, Iraq and China. It is also connected to key maritime ports in the ECO region, in Turkey, Iran and Pakistan.

The **ECO Rail Route 2A** illustrates the first initiative of the ECO Secretariat in the development of block train services and was initiated in 2002. The ECO rail route 2A is similar to Rail Route 1 up to the city of Aprin (near Tehran, Iran), following then a north eastern direction through Turkmenistan (Mary), Uzbekistan (Navoi, Tashkent)

and ending up at the borders of Kazakhstan with China, after having passed the city of Almaty.

The route has the following eight branches:

- Three in Turkey, connecting the route with Samsun, Mersin, and Izmir ports.
- Three in Iran, the two connecting the route with the Bandar e Abbas and Chabahar ports, and one connecting it to Herat of Afghanistan.
- One connecting Turkmenabad in Turkmenistan with Mazar e Sharif in Afghanistan.
- One connecting Samarkand in Uzbekistan with Mazar e Sharif in Afghanistan.

The route serves the connection of the ECO Member States Turkey, Iran, Turkmenistan, Uzbekistan and Kazakhstan. It is also connected to maritime ports in the ECO region, in Turkey and Iran.

The **ECO Rail Route 2B** is similar to Rail Route 2A up to the city of Neyshabur in Iran, continuing on an eastern direction onto Afghanistan through Herat. Then it follows on the missing link Heart-Mazar e Sharif- Nijniy Pyanj (border with Tajikistan), followed by the missing link Nijniy Pyanj -Kurgan Tube in Tajikistan. Finally, the route ends with the missing link Karamyk-Irkhestam through Kyrgyzstan towards China.

The route has the following five branches:

- Three in Turkey, connecting the route with Samsun, Mersin, and Izmir ports.
- Two in Iran, connecting the route with the Bandar e Abbas and Chabahar ports.

The route serves the connection of the ECO Member States Turkey, Iran, Afghanistan, Tajikistan and Kyrgyzstan. It is also connected with maritime ports in the ECO region, in Turkey and Iran.

The **ECO Rail Route 3** constitutes the “left side route” of the Caspian Sea. It follows a southern direction, originating at the border crossing of Afghanistan with the Russian Federation, crossing on a southern direction the two ECO Member States, Azerbaijan and Iran, ending up at the Bandar e Abbas port in Iran. In this particular route, a key link is under construction, this of Astara, which involves a bridge connecting the railway of the two countries.

The route has the following five branches:

- Three maritime links within the Caspian Sea, connecting Qazvin with Baku in Azerbaijan (missing link), Turkmenbashi in Turkmenistan, and Aktau in Kazakhstan(missing link).
- Two within the territory of Iran, connecting the route with the ports of Bandar e Emam Khomeyni and Chabahar ports.

The route serves the connection of the ECO Member States Afghanistan, Azerbaijan and Iran. It is also connected with key maritime ports in the ECO region, in Turkey and Iran.

The **ECO Rail Route 4** constitutes the “right side route” of the Caspian Sea. It starts in Kazakhstan at the border crossing with the Russian Federation (Zhaisan), continuing on a south-western direction to Aktau, continuing then south onto Turkmenistan (Bereket), to the border with Iran, crossing the Iranian territory through Neyshabur and ending up in Bandar e Abbas port. There is a major link under construction at the borders of Turkmenistan with Kazakhstan. This route constitutes the main alternative to the North-South corridor that currently connects the Russian Federation with the port of Bandar Abbas in Iran.

The route has one branch, connecting it with the Chabahar port in Iran.

The route serves the connection of the ECO Member Kazakhstan, Turkmenistan and Iran.

The **ECO Rail Route 5** originates in the borders with the Russian Federation (Mamlyutka or Bulaevo), crossing Kazakhstan on a southern direction through Shymkent, crossing onto Uzbekistan through Tashkent and Bukhara to the border with Turkmenistan. It then continues on a south-western direction through Turkmenistan, crossing over to Iran and ending up at the Bandar e Abbas port.

The route has two proposed extensions, one connecting the route with the Russian Federation through Zhaisan in Kazakhstan, and another one connecting the route with China through Turugart in Kyrgyzstan.

The route has also the following two branches:

- One in Iran, connecting the route with Chabahar port.
- One connecting Lugovaya in Kazakhstan with Astara.

The route serves the connection of the ECO Member Kazakhstan, Uzbekistan, Turkmenistan and Iran, with extensions towards China and the Russian Federation. It is also connected with key maritime ports in Iran.

Table 3.1- Rail Route 1

ROUTE Number	From-To
ROUTE 1	Turkey
	(Bulgaria border)-Kapikule/(Greece border)-Uzunkopru-Istanbul (European side)-Ferry link (tunnel under construction)-Istanbul (Asian side)-Izmit-Bilecik-Eskisehir-Ankara-Kayseri-Bostankaya-Malatya-Elazig-Mus-Tatvan-Ferry Lake Van (new alignment planned)-Van-Kapikoy-(border with Iran)
	Iran
	(border with Turkey)-Razi-Sufiyan- Tabriz-(Maraqeh)-Miyaneh (under construction)-Zanjan-Qazvin – Aprin (near Tehran)-Mohammadiyeh-Kashan-Yazd-Bafq-Kerman-Bam-Zahedan-(gauge change to 1676 mm)-Mirjaveh-(border with Pakistan)
	Pakistan
	(border with Iran)-Taftan – Nok Kundi-Dalbandin-Ahmad Wal-Spezand-Kolpur-Abi Gum-Sibi-Jacob Abad-Rohri-Samasatta-Multan-Khanewal-Faisal Abad-Wazirabad-Lalamusa-Rawalpindi-Islamabad
ECO-RAIL 1-E-B (IRAN)	Tehran-Arak-Ahvaz-Khorram Shahr-(under construction:border with Iraq)-(existing line) towards Basrah
ECO-RAIL 1-E-C (PAKISTAN) (gauge 1676)	Rohri-Padidan-Hyderabad-Pithoro-Khokhropar-(border with India) towards Munabao
ECO-RAIL 1-E-D (PAKISTAN) (gauge 1676)	Samasatta-Armuka-(border with India) towards Bhathinda
ECO-RAIL 1-E-E (PAKISTAN) (gauge 1676)	Wazirabad-Lahore-Wagah-(border with India) towards Amritsar
ECO RAIL 1-E-F (PAKISTAN) (gauge 1676)	Rawalpindi-Havelian-new line until border with China towards Khanjurab

ROUTE Number	From-To
Extensions	
ECO-RAIL 1-E-A **(IRAN)**	[Tehran-Hamedan-Malayer under construction]-Khosravi-(planned new line until border with Iraq)-(existing line) towards Khanaqin
Branches	
ECO-RAIL 1-B-A **(TURKEY)**	Bostankaya-Sivas-Amamsya-Samsun
ECO-RAIL 1-B-B **(TURKEY)**	Malatya-Adana-Mersin
ECO-RAIL 1-B-C **(TURKEY)**	Eskisehir-Alayunt-Balikesir-Manisa-Izmir
ECO-RAIL 1-B-D **(IRAN)**	Bafq-Sirjan-Bandar e Abbas
ECO RAIL 1-B-E **(IRAN)**	Zahedan-Chabahar (under construction)
ECO RAIL 1-B-F **(PAKISTAN)** **(gauge 1676)**	Rawalpindi-Peshawar-Landi Kotal-(border with Afghanistan)-new line until Jalal Abad
ECO RAIL 1-B-G **(PAKISTAN)** **(gauge 1676)**	Rohri-Padidan-Hyderabad-Drigh Colony-Karachi
ECO RAIL 1-B-H **(PAKISTAN)** **(gauge 1676)**	Spezand-Chaman-(under construction until border with Afghanistan-Spin Boldak)-new line to Kandahar
ECO RAIL 1-B-I **(PAKISTAN)** **(gauge 1676)**	New line Mastung-Gwadar

Table 3.2- Rail Route 2A

ROUTE Number	From-To
ROUTE 2A	Turkey
	(Bulgaria border)-Kapikule/(Greece border)-Uzunkopru-Istanbul (European side)-Ferry link (tunnel under construction)-Istanbul (Asian side)-Izmit-Bilecik-Eskisehir-Ankara-Kayseri-Bostankaya-Malatya-Elazig-Mus-Tatvan-Ferry Lake Van (new alignment planned)-Van-Kapikoy-(border with Iran)
	Iran
	(border with Turkey)-Razi-Sufiyan- Tabriz-(Maraqeh)-Miyaneh (under construction)-Zanjan-Qazvin-Aprin (near Tehran)-Semnan-Neyshabur-Sarakhs-(border with Turkmenistan)
	Turkmenistan
	(border with Iran)-(gauge change to 1520mm)-Serakhs-Yoloten-Mary-Turkmenabad-Farab- (border with Uzbekistan)
	Uzbekistan
	(border with Turkmenistan)-Khojadavlet-(Bukhara)-Navoi-Samarkand-Jizzakh-Khavast-Tashkent-(border with Kazakhstan)
	Kazakhstan
	(border with Uzbekistan)-Saryagash-Arys-Shymkent-Lugovaya-Birlik-Almaty-Aktogai-Dostyk-(border with China**)** towards Alashankou/Urumchi
Branches	
ECO-RAIL 2A-B-A (TURKEY)	Bostankaya-Sivas-Amasya-Samsun
ECO-RAIL 2A-B-B (TURKEY)	Malatya-Adana-Mersin
ECO-RAIL 2A-B-C (TURKEY)	Eskisehir-Alayunt-Balikesir-Manisa-Izmir

ROUTE Number	From-To
ECO-RAIL 2A-B-D (IRAN)	Neyshabur-Bafq-Sirjan-Bandar e Abbas
ECO RAIL 2A-B-E (IRAN)	Neyshabur-Bafq-Kerman-Zahedan-under construction-Chahabar
ECO-RAIL 2A-B-F (IRAN, AFGHANISTAN)	Neyshabur-Torbat e Heydariyeh- Ma'dan e Sagan- (under construction)-(border with Afghanistan)- Herat (Afghanistan)
ECO-RAIL 2A-B-G (TURKMENISTAN, UZBEKISTAN, AFGHANISTAN) (gauge 1520)	Turkmenabad-Kelif-(border with Uzbekistan)-PN161-Termez-(border with Afganistan)-Khairaton-(under construction)-Mazar e Sharif
ECO RAIL 2A-B-H (UZBEKISTAN, TAJIKISTAN, AFGHANISTAN) (gauge 1520)	Samarkand-Karshi-Guzar-(under construction)-Kumkurgan-Saryasiya-(border with Tajikistan)-Pahtaabad-Dushanbe-Vahdat-(under construction)-Yavan-[new railway line: Kulyab-Kurgan Tube-Kalkhaz Abad]-[under construction: (border with Afghanistan)-Shirkhan Bandar-Kunduz-Mazar e Sharif
ECO RAIL 2A-B-I (UZBEKISTAN, TAJIKISTAN)	Bukhara-Karshi-(under construction)-Kumkurgan-Dushanbe-Vahdat-Karamyk-(border with Kyrgyzstan) (new line)

Table 3.3- Rail Route 2B

ROUTE Number	From-To
	Turkey
	(Bulgaria border)-Kapikule/(Greece border)-Uzunkopru-Istanbul (European side)-Ferry link (tunnel under construction)-Istanbul (Asian side)-Izmit-Bilecik-Eskisehir-Ankara-Kayseri-Bostankaya-Malatya-Elazig-Mus-Tatvan-Ferry Lake Van (new alignment

ROUTE Number	From-To
ROUTE 2B **(Standard gauge track)**	planned)-Van-Kapikoy-(border with Iran)
	Iran
	(border with Turkey)-Razi-Sufiyan- Tabriz-(Maraqeh)-Miyaneh (under construction)-Zanjan-Qazvin-Aprin (near Tehran)-Semnan-Neyshabur-Sarakhs-(border with Turkmenistan)-Ma'dan e Sangan-(under construction until border with Afghanistan)
	Afghanistan
	(border with Iran)-under construction until Herat-[new line: Kusk-Kalainau-Meymaneh-Andkhoi-Sheberghan-Mazar e Sharif]-[under construction: Baghlan-Kunduz-Shirkhan Bandar- (border with Tajikistan)]
	Tajikistan
	[under construction: (border with Afghanistan)-Nijniy Pyanj-Dusti-Kalkhaz Abad]-Kurgan Tube-Kulyab-(new line)-Yavan-(under construction)-Vahdat-(new line)-Karamyk-(border with Kyrgyzstan)
	Kyrgyzstan
	New line: (border with Tajikistan)-Sary Tash-Irkeshtam-(border with China) towards Kashgar (Kashi)

Branches	
ECO-RAIL 2B-B-A **(TURKEY)**	Bostankaya-Sivas-Amasya-Samsun
ECO-RAIL 2B-B-B **(TURKEY)**	Malatya-Adana-Mersin
ECO-RAIL 2B-B-C **(TURKEY)**	Eskisehir-Alayunt-Balikesir-Manisa-Izmir
ECO-RAIL 2B-B-D **(IRAN)**	Neyshabur-Bafq-Sirjan-Bandar e Abbas
ECO RAIL 2B-B-E **(IRAN)**	Neyshabur-Bafq-Kerman-Zahedan-(under construction) Chabahar

Table 3.4- Rail Route 3

ROUTE Number	From-To
ROUTE 3	Azerbaijan
	[railway gauge 1520mm] (border with Russia)-[standard gauge]-Yalama-Sumqayit-Baku-Astara-(border with Iran)
	Iran
	(border with Azerbaijan)-Astara-(under construction)-Qazvin-Karaj-Tehran-Qom-Yazd-Bafq-Sirjan-Bandar e Abbas
Branches	
ECO-RAIL 3-B-A (CASPIAN SEA, AZERBAIJAN, IRAN)	[under construction: Qazvin-Rasht-Bandar e Anzali]-ferry link to Baku (Azerbaijan)
ECO-RAIL 3-B-B (CASPIAN SEA, KAZAKHSTAN, IRAN)	[under construction: Qazvin-Rasht-Bandar e Anzali]-missing ferry link to Aktau (Kazakhstan)
ECO-RAIL 3-B-C (CASPIAN SEA, TURKMENISTAN, IRAN)	[under construction: Qazvin-Rasht-Bandar e Anzali]-ferry link to Turkmenbashi (Turkmenistan)
ECO-RAIL 3-B-D (IRAN)	Qom-Arak-Ahvaz-Bandar e Emam Khomeyni
ECO-RAIL 3-B-E (IRAN)	Bafq-Kerman-Zahedan-(under construction) Chabahar

Table 3.5- Rail Route 4

ROUTE Number	From-To
ROUTE 4	Kazakhstan
	(border with Russia)-Zhaisan-Aktobe-Kandagach-(under construction)-Makat-Beineu-Aktau-Uzen (under construction)-(border with Turkmenistan)
	Turkmenistan
	Under construction:_(border with Kazakhstan)-Bereket-Godurolum-(border with Iran)
	Iran
	(under construction)-(border with Turkmenistan)- [railway gauge 1536mm]-new line to Inchehbrun-Gorgan-new line Shahrud-Neyshabur-Torbat e Heydariyeh-Bafq-Sirjan-Bandar e Abbas
Branches	
ECO-RAIL 4-B-A **(IRAN)**	Bafq-Kerman-Zahedan-(under construction) Chabahar

Table 3.6- Rail Route 5

ROUTE Number	From-To
ROUTE 5	Kazakhstan
	[railway gauge 1520mm] (border with Russia)-Mamlyutka or Bulaevo-Petropavlosk-Kokshetau-Astana-Karaganda- Birlik-Lugovaya-Taraz-Arys-Saryagash-(border with Uzbekistan)
	Uzbekistan
	(border with Kazakhstan)-Tashkent-Gulistan-Jizzakh-Samarkand-Navoi-Kagan-(Bukhara)-Khojadavlet- (border with Turkmenistan)
	Turkmenistan
	(border with Uzbekistan)-Farab-Turkmenabad-Mary-Yoloten-Serakhs-(border with Iran)

ROUTE Number	From-To
	Iran
	[gauge change to 1435mm] (border with Turkmenistan)-Sarakhs-Fariman-Torbat e Heydariyeh-Bafq-Sirjan-Bandar e Abbas
Extensions	
ECO RAIL 5-E-A (KAZAKHSTAN) (gauge 1520)	Arys-Kyzylorda-Aktobe-Zhaisan-(border with Russia)
ECO-RAIL 5-E-B (UZBEKISTAN, KYRGYZSTAN) (gauge 1520)	Tashkent-Angren-(under construction)-Namangan-Andizhan-Khanabad-(border with Kyrgyzstan)-Jalal Abad-Kok Yangankg-[new line: Turugart-(border with China) towards Kashgar(Kashi)]
Branches	
ECO-RAIL 5-B-A (IRAN)	Bafq-Kerman-Zahedan-(under construction) Chabahar
ECO RAIL 5-B-B (KAZAKHSTAN, KYRGYZSTAN)	Lugovaya-Merke- (border with Kyrgyzstan)-Kara Balta-Bishkek-Rybachiye-[new railway line Kochkorka-Kora Keche-Arpa]

4. METHODOLOGY FOR PROJECT PRIORITIZATION

4.1 Introduction

The framework for the prioritization of new proposed rail projects to be included in the railway network development plan for the ECO region entails the development of a methodology for the identification of proposed projects and their prioritisation according to specified implementation time periods with the scope to develop an investment plan for rail transport infrastructure in the ECO region.

The method proposed is straightforward, and is based on the well established Multi-Criteria Analysis (MCA). The application of the method will identify these projects that are likely to be implemented in selected time periods (short term, medium term, long term) and at the same time address the specific objectives of the countries and the international character of the projects.

This method establishes preferences between options by reference to an explicit set of objectives that the decision making body (e.g. Ministry of Transport/Infrastructure) has identified, and for which it has established measurable criteria to assess the extent to which the objectives have been achieved. These criteria are defined through observations, discussions, experimentations and trial-and-error processes. Although there is an inherent subjectivity associated with this method, it is believed that it can bring a degree of structure, analysis and openness to classes of decision. The preferences are merely related to the time frame/periods of the projects implementation. Four time frames/periods are selected, as will be described in the following.

Consequently, no evaluation is carried out for the projects, since this would require a vigorous feasibility study for each project with the same measurement values and then cross-evaluation of the projects between the participating countries. Nevertheless, in the case that the countries have carried out an evaluation/feasibility study, the results of such study (e.g. IRR) will be taken into consideration.

4.2 Overview of the Methodology

The proposed methodological framework for project prioritization is structured in three phases, i.e. identification, analysis and time period classification, in order to secure the inclusion of the sum of all proposed transport infrastructure projects in the ECO territory in the prioritization exercise.

The definition of “project”, as specified for the purpose of the methodology, is the following:

Definition of Project: A project is considered a new construction or the upgrade/rehabilitation of a transport infrastructure section. Also a project can be the construction or the upgrade/rehabilitation of a transport terminal/port (maritime or inland waterways) etc. The infrastructure section can vary in length however it should constitute an expenditure of almost 10 million $. An exception of the latter mentioned rule applies if the project involves a missing link or a bottleneck.

The phases of the proposed methodology are described in detail in the following sections.

(i) Phase A-Identification

The identification phase entails the recording of prospective projects, based on their readiness and funding possibilities, as well as the common-shared objectives of responsible authorities, national or international, and the collection of readily available information/ data regarding these projects.

In this phase, initially, the distinction of projects in two major categories is made, that is, those with committed funding and those without committed funding. Obviously, projects with secured funding can be directly considered viable and with a high possibility to be completed in the near future. For projects without committed funding or partly committed funding, further evaluation is carried out in order to set implementation priorities, against common shared objectives between national and international authorities (See next section on Analysis Phase).

It should be noted, that the identification, as well as the analysis, is based on data collected from the countries, and thus, projects, for which no data is provided, will automatically be classified as last priority in terms of implementation.

(ii) Phase B – Analysis

The Multi-Criteria Analysis (MCA) method is used for the analysis of the identified unfunded projects. The MCA is selected due to a number of factors, such as the very preliminary level of definition of most unfunded -or partly funded projects, the lack of specific information on the current status, the limited knowledge on transport demand perspectives and the variety in types of projects.

Such a method will allow available information to be taken into account on projects, even at their very preliminary level of definition, as well as - to a certain extent –any background data. At the same time, some specific elements of particular interest to the decision-makers may be introduced.

The objective of this phase is to derive scores (degree of performance) for the unfunded –or partly funded- projects, which will be used as an indicator for the application of Phase C of the proposed methodology. To this end, Phase B, includes the following steps:

(a) Definition of criteria

(b) Measurement of criteria

(c) Criteria weighting

(d) Derivation of total score per project

(a) Definition of Criteria

Since the assessment of a group of projects in terms of their social impacts is a key objective (the projects will be mainly financed with public funds, national or international), the criteria are defined according to two basic principles, i.e. the functionality and coherency of the transportation network to be developed including strategic/ political concerns of the national authorities (or international in the case of co-financing by them), and its social and environmental impacts.

Therefore, based on the above two fundamental orientations/ principles of the process, the following criteria are introduced:

1. Serve for the development of a transport corridor within the ECO countries (C1)
2. Serving international connectivity (C_2)
3. Serve landlocked countries (C_3)
4. Social and economic impact (C_4)
5. Infrastructure/missing links (C_5)
6. Have high degree of urgency due to importance attributed by the national authorities and/or social interest (C_6)
7. Environmental and social impact (C_7)
8. Pass socio-economic viability test (C_8)

(b) Measurement of criteria

Criteria can be quantified for each of the projects under consideration either by direct classification according to measurable characteristics, or by "quality attributes", assessed by expert judgment. Such subjective measurement is unavoidable in a multi-criteria analysis, whenever available information is not precise or reliable enough. To this end, the measurement of the defined criteria will be as follows:

C1: ON-OFF CRITERION

Serve for the development of a transport corridor within the ECO countries

YES ☐ NO ☐ ,

C2: Is the project serving international connectivity?

YES ☐ NO ☐

If yes, is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

C3: Will the project promote solutions to the particular transit transport needs of the landlocked countries?

YES ☐ NO ☐

If yes the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

C4: Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

YES ☐ NO ☐

If yes the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

C5: Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links?

YES ☐ NO ☐

If yes, the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

C6: Have high degree of urgency due to importance attributed by the national authorities and/or social interest

YES ☐ NO ☐

The project is:

A: In the national plan and immediately required (for implementation up to 2013), B: In the national plan and very urgent (for implementation up to 2016), C: In the national plan and urgent (for implementation up to 2020), D: In the national plan but may be postponed until after 2020, E: Not in the national plan.

C7: Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES ☐ NO ☐

If yes, the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

C8: The project is expected to increase traffic (both existing and generated):

A: More than 15%, B: 10-15%, C: 5- 10%, D: less than 5%, E: Will not affect traffic

(c) Criteria weighting

The default set of criterion weights defined by the Consultant, which are going to be used for the evaluation of projects is presented in Table 4.1 below.

TABLE 4.1-Criteria Weights

Criterion Weight	Description of Criterion	Default Weight
W_{C1}	Serve for the development of a transport corridor within the ECO countries	0.2
W_{C2}	Serving international connectivity	0.15
W_{C3}	Serving landlocked countries	0.1
W_{C4}	Social and economic impact	0.15
W_{C5}	Infrastructure/missing links	0.1
W_{C6}	Have high degree of urgency due to importance attributed by the national authorities and/or social interest	0.1
W_{C7}	Environmental and social impact	0.1
W_{C8}	Pass socio-economic viability test	0.1
Total		**1**

The work will be advanced on the basis of the default weights proposed in the above and in case of disagreement, country experts may fill up the respective column of their country with their proposed scores, providing explanations on the reasons for changing the scores, and return it.

In order to make the various criterion scores compatible, it is necessary to transform them into one common measurement unit or else transform “physical scale” measurement into a common “artificial scale” measurement. The criteria quantification is not based on a sophisticated utility function, but on a simple linear function, which connects threshold values of an artificial scale with threshold values of a physical scale.

The artificial scale chosen is: A = 5, B = 4, C = 3, D = 2, E = 1, with 5 being the

highest value. Therefore:

$$C_{Ji} \in [1,5] \quad (1)$$

Where:

J = A or B and

i = 1,….,5

At this stage, the weighing of the criteria takes place. The Pair Comparison Matrix is used as a method of weighting, chosen because it is a simple, transparent and widely accepted procedure.

The resulting criteria weights add up to unity, as shown below:

$W_{Ji} \in [0,1]$ and

$$\sum_{J=A}^{C}\sum_{i=1}^{5} W_{Ji} = 1 \quad (2)$$

Where:

J = A, B *(representing the criteria dimensions)*

i = 1,..,5 *(representing the number of criteria in each dimension)*

(d) Derivation of total score per project

To derive the project’s **total performance score** the following function (3) is used:

$$T.S._{Project} = \sum_{J=A}^{C}\sum_{i=1}^{5} C_{Ji} * W_{Ji} \quad (3)$$

where:

$C_{Ji} \in [1,5]$

$W_{Ji} \in [0,1]$

J = A or B and

i = 1,….,5

To this end, $T.S._{Project} \in [1,5]$ or else the Total Performance Score – for all dimensions together - of each project in each country will be the weighted sum of the criteria scores and will take values between 1 (the lowest) and 5 (the highest).

(iii) Phase C – Time Period Classification

In the final phase, the selection of projects is carried out according to their "performance" score. Based on the latter, projects are classified into four Time Period Categories (I, II, III and IV), as follows:

- If the project scores between 4-5 then it belongs to **Category I.**
- If the project scores 3 -4 then it belongs to **Category II**.
- If the project scores 2 -3 then it belongs to **Category III**.
- If the project scores 1-2 then it belongs to **Category IV**.

Finally, the classification of time periods is the following:

- **Category I**: projects, which have funding secured and are on-going and expected to be completed in the near future (**up to 2013**).
- **Category II**: projects, which may be funded or their plans are approved and are expected to be implemented rapidly (**up to 2016**).
- **Category III**: projects requiring some additional investigation for final definition before likely financing and implemented (**up to 2020**).
- **Category IV**: projects requiring further investigation for final definition and scheduling before possible financing, including projects, for which insufficient data existed. (**most likely to be implemented after 2020**)

4.3 Projects Prioritisation Presentation

The scope of this section is to analyse the information on the transport infrastructure projects based on country inputs, prioritize these through the application of the proposed methodology and include them in the railway network development plan of the ECO region. The goal is to present a consistent and realistic short, medium and long term investment strategy for the identified ECO Priority Rail Routes. This includes an extensive inventory of the rail infrastructure projects for the participating countries, together with their estimated budget and pragmatic investment time plan for their implementation.

Input received

Out of the 8 countries participating in this project, all countries submitted data through their National Experts on the projects under evaluation.

Data presentation

Each project was identified with a unique Project ID specifying the country, the rail transport mode and a specific number. The following abbreviations were introduced for country identification in Project ID: Afghanistan (AFG), Azerbaijan (AZE), Belarus (BLR), Iran (IRN), Kazakhstan (KAZ), Kyrgyzstan (KGZ), Pakistan (PAK), Tajikistan (TJK), AND Turkey (TUR). The abbreviation RLW was introduced in the Project ID.

Table 4.2 presents the number of projects submitted by each country per type of infrastructure under the two distinct categories, that is, those that are along proposed ECO routes, and those that are of national importance, thus belonging to the Reserve Category.

Annex II presents the database of project information, for all projects considered for each of the participating countries.

TABLE 4.2-Number of Projects Submitted

Country	Total	ECO
Afghanistan	4	2
Azerbaijan	2	2
Iran	9	8
Kazakhstan	8	6
Kyrgystan	2	1
Pakistan	10	7
Tajikistan	3	3
Turkey	11	11
Total	**49**	**40**

4.4 ECO Priority Prioritisation Exercise

This section presents the results of the application of the prioritisation methodology on the projects considered at the country level. To this end, projects together with their associated costs are presented by the following priority categories:

- **Category I**: projects, which have funding secured and are on-going and expected to be completed in the near future (up to 2013).
- **Category II**: projects, which may be funded or their plans are approved and are expected to be implemented rapidly (up to 2016).
- **Category III**: projects requiring some additional investigation for final definition before likely financing and implemented (up to 2020).
- **Category IV**: projects requiring further investigation for final definition and scheduling before possible financing, including projects, for which insufficient data existed. (most likely to be implemented after 2020)
- **Completed projects**
- **Projects along other routes and of national importance**

It should be noted that the application of the methodology was based on the data received by each participating country. Nevertheless, the application of the methodology was not feasible in a number of cases due to limited availability of data. To this end, in the case of limited data availability, the Consultant attempted to either collect the missing information from other sources, or categorise the project based on the available data. The cases, for which the application of the methodology was carried out, are presented in detail in *Annex IV*.

In addition, projects along other routes of national importance were not evaluated 0and hence not included in the prioritisation exercise.

Project costs are depicted in Million United States Dollars. Where necessary, an average conversion rate for year 2011 was used[3] .

Afghanistan

Afghanistan proposed 4 rail projects, 2 of which are along proposed ECO Rail Routes. One project has committed funding and was classified as Category I, while the other is still in the planning stage with no funding secured, and, thus was classified as Category IV.

According to available information 52% of the funding has been secured.

The above information complete with project costs is summarized in Table 4.3 below.

Table 4.3-Afghanistan Prioritisation Results Summary

	All	**I**	**II**	**III**	**IV**	**Completed**
No. of railway projects	**2**	1			1	
Cost* of railway projects	**250**	130			120	

** in million USD*

Azerbaijan

Azerbaijan proposed 2 rail projects along proposed ECO Rail Routes, for which no information is currently available, and hence, were classified as Category IV.

The above information is summarized in Table 4.4 below.

[3] http://www.x-rates.com/d/USD/EUR/hist2011.html

Table 4.4-Azerbaijan Prioritisation Results Summary

	All	I	II	III	IV	Completed
No. of railway projects	**2**				2	
Cost* of railway projects	****				**	

** in million USD*

*** no information on cost*

Iran

Iran proposed 9 rail projects, out of which 8 are along proposed ECO Rail Routes, as per the following:

- 5 are under construction and were classified as Category I.
- 3 were classified as Category II, based on the application of the methodology.

According to available information 69% of the funding has been secured.

The above information complete with project costs is summarized in Table 4.5 below.

Table 4.5-Iran Prioritisation Results Summary

	All	I	II	III	IV	Completed
No. of railway projects	**8**	5	3			
Cost* of railway projects	**>7596**	>5250	2346			

** in million USD*

Kazakhstan

Kazakhstan 8 rail projects, out of which 6 are along proposed ECO Rail Routes as per the following:

- 4 were classified as Category I.
- 2 for which no information on cost, funding and start and end dates was given, were classified as Category IV.

According to available information 89% of the funding has been secured.

The above information complete with project costs is summarized in Table 4.6 below.

Table 4.6- Kazakhstan Prioritisation Results Summary

	All	**I**	**II**	**III**	**IV**	**Completed**
No. of railway projects	**6**	4			2	
Cost* of railway projects	**>2282**	>2042			>240	

** in million USD*

Kyrgyzstan

Kyrgyzstan proposed 2 rail, out of which 1 is along proposed ECO Rail Routes. Based on the application of the methodology, this was classified as Category II.

The above information complete with project cost is summarized in Table 4.7 below.

Table 4.7- Kyrgyzstan Prioritisation Results Summary

	All	**I**	**II**	**III**	**IV**	**Completed**
No. of railway projects	**1**		1			
Cost* of railway projects	**2000**		2000			

** in million USD*

Pakistan

Pakistan proposed 10 rail projects, out of which 7 are along proposed ECO Rail Routes. Based on the application of the methodology:

- 4 were classified as Category II
- 3 were classified as Category III

The above information complete with project cost is summarized in Table 4.8 below.

Table 4.8- Pakistan Prioritisation Results Summary

	All	I	II	III	IV	Completed
No. of projects	**7**		4	3		
Cost* of projects	**12831**		10034	2796		

** in million USD*

Tajikistan

Tajikistan proposed 3 rail projects along proposed ECO Rail Routes, which, based on the application of the methodology, were classified as Category II.

The above information complete with project costs is summarized in Table 4.9 below.

Table 4.9- Tajikistan Prioritisation Results Summary

	All	I	II	III	IV	Completed
No. of railway projects	**3**		3			
Cost* of railway projects	**3120**		3120			

** in million USD*

Turkey

Turkey proposed 11 rail projects along the proposed ECO Rail Routes. Based on the application of the methodology:

- 5 were classified as Category I
- 4 were classified as Category II
- 2 were classified as Category III

According to available information 59% of the funding has been secured.

The above information complete with project costs is summarized in Table 4.10 below.

Table 4.10- Turkey Prioritisation Results Summary

	All	I	II	III	IV	Completed
No. of projects	**11**	5	4	2		
Cost* of projects	**15319**	9067	5836	416		

** in Million USD*

4.5 Summary

In total 49 projects were proposed by the participating countries, out of which **40 rail projects** have been identified to be along the proposed ECO Rail Routes with an estimated total cost of **43,4 Billion USD**.

Out of these **40 projects**:

- 15 projects belong to Category I
- 15 projects belong to Category II
- 5 projects belong to Category III
- 5 projects belong to Category IV

The above results together with project costs are presented in Table 4.11.

Table 4.11-Summary Results of ECO Rail Projects

	All	Per Priority Category				
		I	II	III	IV	Completed
No. of railway projects	**40**	15	15	5	5	0
Cost* of railwaprojects	**43.4**	16,5	23,3	3,2	0,4	0,0

**in Billion USD*

The **percentage of secured funding** for the total number of ECO Rail Projects is **38%.**

Further to the above, the results of the prioritisation exercise are summarised per priority category:

- 37.5% of the rail projects belong to Category I, with an estimated value of $16,5 billion, representing 38% of the total investment cost.
- 37.5% of the rail projects belong to Category II, with an estimated value of $23,3 billion, representing 54% of the total investment cost.
- 12.5% of the rail projects belong to Category III, with an estimated value of $3,2 billion, representing 7% of the total investment cost.
- 12.5% of the rail projects belong to Category IV, with an estimated value of $0,4 billion, representing 1% of the total investment cost.

4.6 ECO Railway Network Development Plan

The analysis of the rail projects implementation plans demonstrated that:

- No projects for have been completed.
- 38 % of the proposed projects for the ECO Rail Network are expected to be completed until 2013.
- 38 % of the proposed projects for the ECO Rail Network are expected to be completed until 2016.
- 13% of the proposed projects for the ECO Rail Network, it is possible to be completed until 2020 and
- For 13% of the proposed projects for the ECO Rail Network, it is unknown when would be completed, since further investigation is necessary before definition, scheduling and possible financing.

The ECO Rail Transport Network Development Investment Plan is depicted in Table 4.12 with related project costs presented in Billion USD. The available/secured percentage of funding is also shown in Table 4.12. The implementation of the Railway Network will follow the time plan presented in Table 4.13.

Table 4.12- ECO Rail Transport Network Development Investment Plan

ALL RAIL PROJECTS							
Country	Total Cost	PRIORITY CATEGORY					% Funding Secured
		I	II	III	IV	COMPLETED	
Afghanistan	250	130	0	0	120	0	52%
Azerbaijan	0	0	0	0	0	0	0%
Iran	7596	5250	2346	0	0	0	69%
Kazakhstan	2282	2042	0	0	240	0	89%
Kyrgystan	2000	0	2000	0	0	0	0%
Pakistan	12831	0	10034	2796	0	0	0%
Tajikistan	3120	0	3120	0	0	0	0%
Turkey	15319	9067	5836	416	0	0	59%
Total	**43398**	**16489**	**23336**	**3212**	**360**	**0**	**38%**

Table 4.13- ECO Rail Transport Network Development Time Plan

Country	Projects	EATL Projects Implementation Progress					Project Funding
		Completed	Up to 2013	2013-2016	2016-2020	2020-unknown	% Secured
AFG	2	0%	50%	0%	0%	50%	52%
AZE	2	0%	0%	0%	0%	100%	0%
IRN	8	0%	63%	38%	0%	0%	69%
KAZ	6	0%	67%	0%	0%	33%	89%
KGZ	1	0%	0%	100%	0%	0%	0%
PAK	7	0%	0%	57%	43%	0%	0%
TJK	3	0%	0%	100%	0%	0%	0%
TUR	11	0%	45%	36%	18%	0%	59%
ECO NETWORK	**Projects**	**EATL Projects Implementation Progress**					**% Funding Secured**
		Completed	**Up to 2013**	**2013-2016**	**2016-2020**	**2020-unknown**	
	40	**0%**	**38%**	**38%**	**13%**	**13%**	**38%**

4.7 Conclusion

A total of 40 rail infrastructure projects along a total length of approximately 12,298 km of railway lines, were proposed in the study and should be included in the ECO Priority Railway Network Development Plan. The implementation of the proposed priority ECO network as a whole will require the approximate sum of $43,4 billion, out of which approximately 38% has been secured.

According to the results of the analysis, no projects have been completed yet, while over a third of the proposed projects are planned to be completed by year 2013. On the other hand, the analysis yielded that for a 13% of the ECO rail network, it is unknown when it would be completed, since further investigation is necessary before definition, scheduling and possible financing of the proposed infrastructure projects. It

should, however, be noted that lack of information with regard to the status, start and end dates, sources of funding and percentage of secured funding of proposed projects contributed significantly to the latter outcome. Hence, the above figures could potentially be different, should information had become available.

Finally, in addition to the projects located along the identified priority ECO Rail Routes, most participating countries proposed infrastructure projects beyond those specified routes and, thus, these were considered to be of national importance and were not considered in the analysis. Depending on the significance and priorities set for such national projects, as well as their potential to impact the established connections with ECO Rail Routes, it is proposed that these projects are considered for inclusion in a future revision of the ECO Rail Network.

5. COUNTRY REPORTS

This chapter presents the Country Reports for each participating country in the study, detailing current conditions on rail transport infrastructure, as well as National Transport Plans and related recommendations, as per the input received from the individual National Experts.

5.1 Afghanistan

Afghanistan has a strategic geographical position, bordering on six countries. Nevertheless the poor condition and lack of efficient transport infrastructure network hinder the movement of passengers and goods within the country constraining post-war economic recovery and development. The major constraints to reconstruction and development of the transport sector are inadequate infrastructure, limited government capacity, and Conflicts and weak security still existing in the country.

The railway system within Afghanistan is practically negligible, with the total length of railways being only 25 km, that is, a 10 km cross-border extension from Turkmenistan to a transshipment yard in Torghundi, and a 15 km extension from Uzbekistan to a transshipment yard in Hairatan.

The rail links and border crossings are the following:

- Heart-Shamtegh (120 km)
- 2Kushk Kuhna-Toorghundy (35 km)
- Shiberghan, Andkhowy-Aqeena (107km)
- Mazar-e-Sharif-Hairatan (75 km)
- Kundoz-Sherkhan Bandar (65 km)
- Turkham-Jalalabad (75 km)
- Kandahar- Speen Buldak (100 km)
- Delaram- Zaranj (230 km)

Regional connectivity is underdeveloped primarily due to cross-border bottlenecks, such as inadequate link roads and facilities, inadequate customs facilities, need for transit permits, lack of vehicle standard and axle load controls, as well as visa regulations, unofficial charges, and the protection given to local trucking. Transit agreements are either nonexistent or poorly enforced. Also, the few existing cross-border railway links have not been developed.

National Plans, Policies and Infrastructure Investment

The Afghanistan National Development Strategy (ANDS) adopted by the Government of Afghanistan (GOA) in April 2008, is the country's main strategic platform for development over the period 2008–2020. In addition, GOA has agreed with the strategy adopted by the Central Asia Regional Economic Cooperation (CAREC) program, which is aimed at developing six corridors across the region and all through Afghanistan.

The Afghan Railway Network Plans include the main ring and eight subdivisions connecting the borders to neighbouring countries, with a total length being approximately 3,450 km.
The alignment of railway for ECO starts from Shamteegh (border Afghanistan and Iran) passing through Heart, Kushk Kuhna, center of Badgees, Faryab, and Jawzjan provinces and ending in Mazar-e-Sharif, in the Balkh province. Then, from Mazar-e-Sharif to Hairatan, the border between Afghanistan and Uzbakistan, and from Mazar-e-Sharif to Kundoz province, ending in Shirkhan Bandar (the border between Afghanistan and Tajikistan). The total length of this alignment is equal to 1180 km.

Likewise, in previous a ECO conference, the proposal from Afghanistan included another alignment from Zahidan through Zabool, Zarange(Nimrooz), Dilaram to connect Hirat and Iran. The ECO members welcomed this proposal. The Ministries of Transport of five countries: China, Kyrgyzstan, Tajikistan, Afghanistan and Iran in a multilateral conference in Doshanba in 2010, confirmed and insisted on the importance of this alignment.

With regard to the implementation of the above mentioned plans, Afghanistan has begun the construction of 75 km from Hairatan to Mazar – e – Sharifi. Meanwhile, the third section from Khawaf – Singan – Hirat = 62 km is expected to be completed and delivered in the near future. The feasibility study of the first phase of railway from Hirat – Mazar – e – Sharif – Sherkhan Bandar has also been completed, while the one for the second phase from Mazar – e – Sharif – Shibirghan – Aqhena (220 km) is expected to begin in 2011.

A research study for appointing the norms for the gauge of Afghanistan Railways has also been carried out. Finally, an independent railway authority for the preparation of laws and policies is also expected to be established in the coming future.

Source: *ADB Report (2010) -Afghanistan Railway Development Study Financed by the Asian Development Bank (ADB)*

5.2 Azerbaijan

Presently, the total track miles of the main railway lines is 2944,3 km, operation length is 2115,7 km, out of which 806,2 km are double track lines. 1269,5 km or 60% are electrified, while 1650 km are equipped by automatic blocking system of signaling. The key links are the following:

1. Baku – Yalama (Russian Federation border): double track, 201 km, in operation.
2. Baku – Boyuk-Kesik (Georgian border): double track, 503 km.
   a. Yevlakh – Balaken: single track, 163 km, in operation.
   b. Yevlakh – Khankendi: single track104 km, 55 km occupied.
   c. Yevlakh – Mingechevir: single track, 30 km, in operation.
   d. Agstafa – Barkhudarly (Armenian border): single track, 28 km, in operation.
3. Baku – Osmanly – Astara (Iranian border): 312 km.
   a. Baku – Osmanly: double track,128 km, in operation.
   b. Osmanly – Astara: single track, 184 km, in operation.
4. Baku – Osmanly – Sadarak (Armenian border): 603 km.
   a. Baku – Osmanly: double track, 128 km, in operation.
   b. Osmanly – Horadiz: single track, 144 km
   c. Horadiz – Karchivan: single track, 143 km, occupied.
   d. Karchivan-Sadarak: single track, 188 km, in operation.
5. Culfa – Culfa (Iran): single track, 3 km,in operation.

The missing connections are the following:

1. Astara – Iranian border: 8,3 km.
2. Currently, the transportation along the road of Baku - Osmanly – Sadarak (Armenian border) is being realized in the area of Baku - Osmanly – Horadiz
   a. Horadiz – Agband: 102 km, occupied.
   b. Agband – Kerchivan: 41 km,occupied.
3. Tezekend – Khankendi: 55 km, occupied.

The rail border crossings are the following:

- Boyuk-Kesik (Georgia border)

- Yalama (Russian Federation border)
- Culfa (Iran border)
- Sadarak (Armenia border)
- Barkhudarly (Armenia border)
- Aktau (Kazakhstan through Baku port)
- Turkmenbashi (Turkmenistan through Baku port)

National Plans, Policies and Infrastructure Investment

The State Development Program of Railway Transport for 2010-2014 years has been confirmed by the arrangement of the President of Azerbaijan Republic, and will include the rehabilitation of infrastructure, renewal of rolling stocks, control systems etc. Over 2 billion USA dollars are invested within this program.

A new railway project, the construction of the Baku-Tbilisi-Kars railway connection has been proposed, which will play an important role in the connection of the Trans European and Asian railway networks. In addition, the construction of the missing 101 km long Kars-Akhalkalaki railway connection line and the railway tunnel within Bosporus strait (Marmara project) have been proposed.

The present length of the railway in the areas of Baku – Yalama (Russian Federation border) and Baku – Boyuk-Kesik (Georgian border) will be kept during the years of 2015 – 2020.

A railway line of 8.3 km to the Iranian border will be constructed in the area of Baku – Osmanly – Astara (Iranian border) across the North-South transport corridor, expected to be completed by year 2015. Currently, the existing railway line from Russia to the south region of Azerbaijan (Astara) is in operation. The railway line of Kazvin-Rasht-Astara (Iran) – Astara (Azerbaijan) which is being constructed in the territory of Iran will be connected with the railway of Russia via the territory of Azerbaijan. The above connection will play an important role in the development of the direct relations with the countries of Europe, Asia, Near East, Scandinavia and Baltic region, across the North-South transport corridor.

Finally, the railway from the Horadiz station to Nakhchivan in the area of Osmanly – Sadarak (Armenian border) will be restored after freeing the occupied territories.

5.3 Iran

The crucial geographical and strategic location of the country in the region, have turned it to a transit route, playing an important role in the trade between West and East. Numerous international corridors cross the territory of the Islamic Republic of Iran, connecting the Middle East and Asia to Europe; the corridors of Trans Asian Railways (TAR), North-South (three branches), China-Europe, Silk Road, TRACECA Corridor, Almaty-Bandar Abbas, Almaty- Istanbul Corridor, as well as the Turkey-Iran-Pakistan, are routes, through which the landlocked countries of Central and South Asia are connected to international waters and Europe.

The transport network of Iran consists of 5 International Rail Border Terminals, which constitute transport links of international significance in the region. It should be noted that in 2010 the total cargo throughput through Rail was 1.3 million tons. Meanwhile, the Government of Iran is planning to increase the transit volume up to 20 million tons through the implementation of several infrastructure projects, which are either planned or are under construction.

The rail network is connected to Turkey in the west (Razi Border), through which it connects to Europe. In the North-West, it is connected to Azerbaijan (Jolfa Border), in the north to the Caspian Sea and ports of Turkmenistan, Kazakhstan, Azerbaijan and Russian Federation. Then, from the North-East of the country through Amir Abad, Neka and Turkman ports, to Turkmenistan, Central Asia, Russia and China f(Sarakhs Border), to Pakistan (Mirjaveh Border), and finally, from the South- East to thee Persian Gulf and international waters through Bandar Abbas and Bandar Emam Khomeini Ports.

In 2011, the total length of the lines was 10106 km, out of which 10008 km is of standard gauge (1435 mm) and 98 km of broad gauge (1676 mm) connected to the Pakistan railway. Of the whole route, 148 km is electrified, 81.16 % is single track and 18.4 double track.

Iran has numerous international border crossing points with neighbouring countries, which include:

- Sangan with Afghanistan;
- Razi with Turkey;
- Astara Nourdouz and Jolfa border with Azerbaijan;
- Mirjaveh with Pakistan.

National Plans, Policies and Infrastructure Investment

In the Islamic Republic of Iran, major road, railway and port development programmes are being undertaken for the expansion and modernization of the transport infrastructure. To realize the country vision for 2025, Railways of Iran has prepared the Rail Transport Industry Perspective with cooperation of affiliated organizations and bodies.

The macro strategies of the railways include:

- Developing rail network to carry 160 million passengers and 202 million tons of freight
- Upgrading existing lines capacity to meet increasing demand
- Improving rail fleet proportional with rail network to reach forecasted freight and passenger share; this shall be realized by supplying 2156 main and shunting locomotives, 50393 freight cars, 5607 passenger cars, and 67 train sets and rail buses.
- Improving productivity of infrastructure, fleet and human power to economize rail transport and equipping the whole rail network with signaling and telecommunications.
- Involving private partnership.
- Strengthening domestic capability to meet rail technology requirements and modern technologies migration.
- Developing combined and door-to-door transportation, improving containerized transport and dry port , interaction with road and sea transport organizations to make a complete transport chain inside the country and the region.
- Facilitating international traffic through network improvement and increasing capacity required for regional and international corridors
- Providing technical and rail transport services based on international standards.

Rail investments are being considered into completing missing links along the following key corridors:

- North-South Corridor (west of Caspian Sea)
- Kazakhstan- Turkmenistan-Iran Corridor (East of Caspian Sea)
- Asia-Europe International Corridor
- East- West Corridor (Persian Gulf- Mediterranean Sea)
- New corridor of China- Kyrgyzistan, Tajikistan. Afqanistan-Iran
- Islamabad- Tehran-Istanbul Corridor
- Bandar Abbas- Almaty Corridor

To this end, the following rail infrastructure projects are under construction or planned:

- Construction of Tabriz-Miyaneh
- Construction of two routes: Qazvin-Rasht-Anzali and Rashat – Astara
- Construction of Khaf-Heart
- Construction of Gorgan-Inchehbrun
- Construction of Arak-Kermanshah-Khosravi
- Construction of Khorramshahr-Shalamcheh-Basra
- Construction of Emam Khomeini Port-Khorramshahr
- Electrification of Bafq-Bandar Abbas
- Electrification of Tehran-Mashhad

In addition, the following projects are planned along the East-West Corridor

Transshipment operations and bogie exchange in Zahedan station:
Currently, the transshipment operations are being carried out in Zahedan by ordinary rubber cranes with no obstacle on the way of trains handling at the station.
Since Pakistan railway owns no bogie wagons, transshipment is the most advisable solution for handling traffic in Zahedan. Therefore, equipping the station- i.e. construction of containerized site, supply of gantry crane or even establishing bogie exchanging system- is subject to the volume of the traffic; once the traffic increases the station would be equipped.

Kerman-Zahedan drift sand removal:
As a long term program, the construction of gallery and plant cultivation is forecasted. To solve the sand problem for the smooth running of trains, one sand removing machine and several loaders and tractors with about 100 workers are continuously removing the sands, and trains face no problem when running on the axis.

Chabahar-Zahedan Railway: 570 Km
The route is divided into two sections 1) Chabahar- Iranshahr and 2) Iranshahr to Dumak (reaching Kerman –Zahedan axis). The studies of the first section are complete and executive works have been already started. Section two is under preliminary studies. At present, the contractors' consultant carries out the studies. The operation year is planned for 2014.

Bogie exchange system in Iran/Azerbaijan border
Since two different track gauges are used in Iran and Azerbaijan (standard and broad gauge), a bogie exchanging system is planned. Initial studies are complete so far but no work has started yet.

5.4 Kazakhstan

Kazakhstan has a key geographical position, in the heart of the Euro-Asian region, and hence, one of the most important factors of economic growth in the country is the rapid development and improvement of transport infrastructure. Kazakhstan has created a competitive environment providing transportation services to accelerate the integration process of its national transport system in the international transport corridors, developing the country's transit potential.

Kazakhstan has relatively low density of railways. In this regard, shippers, particularly in the private sector, began to shift to road transport not only for short distances (up to 300 km), but also for longer ones (1500-2000 km). With the development of industrial and agricultural production, small-and medium-sized businesses increase inter-regional transportation, and communication with neighboring states.

The railway system plays a particularly important role with respect to freight transportation in Kazakhstan. The following table provides information on railway system.

Table 5.1 – The total length of railway lines

№	**Indicators**	**1/01/2010**	**1/01/2011**
A	**Total length of railway track in use**	**15,079.1**	**15,016.1**
	of them		
1	Railway tracks of Kazakhstan	14,202.1	14,184.1
1.1.	including railway tracks of Kazakhstan on the territory of other countries	336.1	336.1
2	Railway tracks of other countries on the territory of Kazakhstan	877.0	832.0
3	The length of electrified railway tracks	4,054.4	4,054.4
B	**Depreciation of fixed assets of railway transport, thousands of tenge/ thousand USD**	25,993,970/ 178,040.1	27,670,041/189,520.8

According to the World Bank, Kazakhstan has one of the busiest railways in terms of traffic volume among the countries of the Eastern Europe and Central Asia region. Moreover, the country’s railways play an important role in transporting coal, minerals and other commodities over vast distances, typically 1,000 kilometers or more, as Kazakhstan’s economy places a heavy emphasis on the production of raw materials and intermediate goods. The Kazakhstan railway system also includes an extensive

passenger network, providing suburban, intercity and interregional passenger services throughout Kazakhstan. Although passenger transportation is important in Kazakhstan, it does not have the same level of activity as that of freight transportation.

At the same time, the current state of rail infrastructure does not meet the requirements for efficient transport, primarily due to the progressive deterioration of its basic equipment, which has already reached a critical level, but also because of the increasing carrying capacity deficit.

To this end, the current transit system does not utilize the country's full transit potential. Given Kazakhstan's geographic and national economic interest in international trade with Russia and China, achieving this potential will require resolution of certain key infrastructure issues and differences in trade policies among trading partners. The World Bank and Asian Development Bank have identified the following trade barriers:

- high transportation and handling costs associated with the use of the railway transit in Kazakhstan. Transportation costs in Kazakhstan account for 8% of the final cost of goods transported via railway, compared to industrialized countries, where transportation costs typically account between 4% and 5% of the final cost of the transported goods;

- lack of adequate storage capacities at cargo terminals and warehouses at certain key rail cities in Kazakhstan;

- delays at the Dostyk railway terminal located at the Kazakhstan-Chinese border due to different rail gauges used by Kazakhstan and China. Due to rail gauge differences, transit goods must be transloaded or re-transferred by machine from China's railcars to Kazakhstan's railcars;

- stringent regulation and documentation requirements imposed by China with regard to the railway system.

National Plans, Policies and Infrastructure Investment

Kazakhstan adopts the Government Planning System (RK President's Decree dated 18 June 2009, No. 827), the key document, which outlines the Development Strategy of the country until 2030 ("Kazakhstan 2030"). The Strategy defines 7 long-term priorities, including infrastructure investments for transport and communication.

The Government planning document of the next level is the "RK Strategic Development Plan for 10 years" and the "Forward-looking Plan of Territorial and Spatial Development of the Country". The Strategic Plan of Development of the Republic of Kazakhstan until 2020 , currently in effect, sets the target indicators for the development of transport by 2020, identifying the infrastructure projects of significant importance. The RK Strategic Development Plan would be adjusted based on the results of the monitoring of its implementation.

In addition to the above, one of the main strategic directions of investment activity in the sector is the reconstruction and modernization of railway infrastructure. This issue is reflected in all policy documents developed, in recent years, with the scope to improve the main-line railway infrastructure in Kazakhstan:

- Strategies for Technology Policy NC "KTZ" for the period 2006-2015. (2006);
- Healthy objects backbone network for the period 2007-2011. (2006);
- Investment Program NC "KTZ" JSC "Locomotive" and JSC "Kaztemirtrans" for 2008-2012. (2007).

The State program for accelerated Industrial-Innovation Development of Kazakhstan for 2010-2014 in the field of railway transport is largely focused on continuous reform of the management of the sector and the transition to free pricing in freight transport. The Program also provides for measures to update and upgrade rolling stock, in particular - the acquisition of more than 600 new locomotives, which should also have a positive impact on the use of transport infrastructure.

The choice of priority and priority investments in strengthening the single-track sections is based on a comparative assessment of their role and importance in the implementation of transport activities, mainly in the context of international transport. As a result, comparisons of lines to strengthen primary priorities are as follows:

- Line Almaty - Shu;
- Line Aktogai - Almaty;
- Line Nikeltau - Makat;
- Lines Dostyk - Aktogai and Aksarayskaya - Makat;
- Line Makat - Beineu;
- Line Aktogai - Mointy.

The Targets of the Programme in the field of rail transport as a result of its implementation, provide for growth in 2015:

- Rail transit - 25%
- Speed of freight trains - by 15-20%, and on major international transport corridors - at 20-30%.

In addition to providing the necessary carrying capacity, it is equally important to increase quality of service. For Kazakh railways such areas, strengthening of which should carry on throughout a single project, include the single-track line: Almaty - Shu, Dostyk - Aktogai, Aktogai – Almaty-Nikeltau - Makat.

In Kazakhstan, the financing of the construction of new railways is mainly provided from the state budget or in the form of concessions. The construction of the railway Shar - Ust-Kamenogorsk was realized on a concessional basis, power lines in the Aktobe region, while a concessional basis is planned for the construction of the railway section Yeralievo – Kuryk. The Construction of railways Zhetygen - Korgas and Uzen - state border with Turkmenistan are at the expense of the state budget and debt of the National Company "Kazakhstan Temir Joly."

It should be noted that the most important stage of development for the railway system in Kazakhstan is the choice of legal model projects with defined funding

sources and mechanisms of return of investment funds. That is why the number one task in the implementation of large projects in the rail industry, would be to create an adequate legal framework, which would be able to provide:

- Creation of conditions for the expansion of private capital inflows, increasing the investment attractiveness of rail transport and to provide sufficient public capital investment in the project, whose socio-economic efficiency;
- Establishing a transparent system of balanced economic relationship of state and representatives of private capital (investors);
- Introduction of innovative technologies and solutions;
- The introduction of technical regulations, aimed at establishing the basic requirements for technical and operational safety;
- The quality of transport services.

5.5 Kyrgyzstan

According to the Kyrgyz Ministry of Transport and Communications, the total length of the railroad system in the Kyrgyz Republic is 424.6 km, consisting of two unconnected lines: a “Southern” line - 323.4 km and a “Northern” line - 101.2 km.

The National Company “Kyrgyz Temir Zholu” State Enterprise is the national railway carrier, which is called upon to ensure sustainable and safe operation of the railway transport system to satisfy needs passenger and freight operator needs. In average, the company carries out annually 15% of all freight turnover of the country, while the number of passengers is 750 000.

Border Crossing Points

The Kyrgyz Republic and its four neighbours have 14 border control points, two of which are major rail corridor crossing points. The largest rail control point is in Bishkek (about 40 km from the border with Kazakhstan). Osh, another rail border-crossing point covers the traffic through the Ferghana Valley. The main problems associated with border crossing points are the poor condition of the buildings/offices and inadequate communication and data processing facilities.

Being also a landlocked country, extremely high transport costs lead to sharp rises in import prices, negatively affecting the development of transit transport.

National Plans, Policies and Infrastructure Investment

One of the key targets of Kyrgyzstan is to fully realize its geographical position to become a transit bridge between Europe and Asia.

At present, the largest share of goods is transported by a road transport (95%), with a significantly smaller share by rail (3.1%). Along with general issues, specific to individual modes of transport, the main problem of the transport network of the country is to improve conditions of transportation on routes providing its international connections and transport in transcontinental communications, as the basis for integration into the global transportation system.

One of the main conditions for successful economic development of Kyrgyzstan and its inclusion in the global transportation system is:

- adaptation to international standards;
- development and improvement of international corridors passing through the territory of Kyrgyz Republic;
- creating the better conditions than those offered by alternative routes of other countries;
- decision on other trading-transport problems and active development of export, import and transit potential.

With regard to the railway sector, despite the drop in industrial indices of the Kyrgyz Railways poor economies of partner countries, the national company provides for the undertaking of the necessary volume of works of restoration and renovation of the rolling stock, as well as the railway lines to maintain works of the Kyrgyz Railways. It

is also worth mentioning that during the period of existence of the Kyrgyz Railways, the company has not received any financial support from the government. Restoration of industrial base and renovation of the rolling stock have been carried out at their own expenses.

The following rail infrastructure projects have been proposed:

- **“China-Kyrgyk-Uzbek trunk” railway project**: The project's main idea is the construction of a south corridor of Eurasian trans-continental trunk railway, which will connect pacific ports with the Persian Gulf and the Mediterranean through the territory of Kyrgyzstan.
- **"Balykchy-Kochkor-Kara-Keche-Arpa" railway project**: The project's main goal is the connection of currently separated railways on the north and south paerts of Kyrgyzstan, completing thus the national network.

Recommendations

For the purpose of further developing the transport sector in the country for sustainable development and economic cooperation in region, the following actions are necessary:

- Review the system of state regulation in the common areas of the country's economic reforms and improve the regulatory framework to enhance investment attractiveness and investment in the automotive industry, while ensuring the safe transport of passengers, cargoes and guaranteed quality of service.
- Initiate communication of ECO member countries with regional economic communities, international economic and financial institutions, primarily with the United Nations (UN), Islamic Development Bank (IDB), Asian Development Bank (ADB) and International Monetary Fund (IMF) for technical and financial assistance and the implementation of priority projects and programs of the region.
- Active participation in international organizations ECO (TTFA, TTKS etc.), SCO (development of a project agreement between Governments of SCO Member States on Facilitation of International Road Transport), EurAsEC (creating a single transport space), TRACECA (EU program on organization of Transport Corridor Europe-Caucasus-Asia).

5.6 Pakistan

Pakistan sprawls in an area of 868591 Km^2 sharing borders with India, Iran, Afghanistan and China. Arabian Sea falls to its south with a coastal line of 1000 odd Km. The North – South geographical layout of the country provides an excellent trade corridor establishing the shortest possible links between the landlocked country of Afghanistan, as well as China with the Arabian Sea. Added to this, Pakistan is inan ideal location accessing the central Asian Countries via Afghanistan, and Europe via Iran, becoming a bridge between Europe and the South East Asia.

The core net work of the Pakistan Railway (PR) is divided into Primary–A, Section 2116 route km, primary B, Section, 2753 route km, Secondary Section, 1184 route km, Tertiary Section 1426 route km and Meter Gauge Section 312 route km. The speed of trains varies with reference to a particular type of section; Primary "A" 105 kmph, Primary "B" 95 kmph, Secondary 75 kmph, Tertiary 65 kmph and Meter Gauge 55 kmph. (Figure 2 & 3). The total route length of the PR stands at 7791 KM spread across all the four provinces of Pakistan. Primary 'A' & 'B' sections provide the fastest and most convenient passages between Karachi and the north of the country taking into its grid all mega cities and industrial and economic hubs. Incidentally, these lines sidle with the road links declared as National trade corridor by the Government of Pakistan (GoP) to be promoted on a fast track basis, where rail and road shall complement each other to address the growing traffic demand. The main features of this route are:-

- Maximum freight train load = 2200 tons
- Maximum coaches per passenger train =18
- Largest cities & industrial mega centers of Pakistan on are around this route; Karachi, Hyderabad, Multan, Faisalabad, Lahore, Gujranwala, Sheikhupura, Gujrat, Sialkot, Islamabad & Peshawar.
- Double line from Karachi to Lahore projected to be completed upto Peshawar.
- Largest Dry Ports of the PR on these routes.
- Mother lines to ECO container train routes.

The ECO route originating from Zahidan, continues all along to Quetta and merges into primary "B" & primary "A" corridors. The secondary route from Taftan to Quetta does not allow more than 55 Km per hour speed. The signalling system is based mostly on standard-I key interlocking with train operation less competitive with road. The trains from Taftan to Quetta are required to be split into smaller loads while passing up and down the Bolan Pass, 101 Km, between Quetta and Sibi, because of the 4% gradient. However, the route from Quetta to Chaman does not pose these challenges. Therefore, an ECO train destined to Afghanistan via Chaman will take the shortest possible time avoiding the Quetta-Sibi steep grade.

National Plans, Policies and Infrastructure Investment

The following policies are being adopted under the auspices of Cabinet Committee on Restructuring of Railway (CCOR).

- Formation of an independent Board of Directors (BOD) in the Ministry of Railways.
  - Constitution of the BOD is under process.
- Undertake corporate restructuring.
  - Dry Ports are being established in private public partnership (PPP), a high speed express train is being introduced in joint venture with the private sector and Commercial Management of the ECO Container Train is planned to be given to a body set up under the stock exchanges of Pakistan, Iran & Turkey.
  - Private Sector has expressed interest in introducing freight trains in PPP mode.
  - Maintenance/rehabilitation of locomotives is being given away to private parties.
- Carry out management restructuring
- National Transport Policy
  - The draft has been prepared by Ministry of Communication under the supervision of Planning Commission of Pakistan to be examined by the sister ministries including Ministry of Railways.

With goals set to develop National trade Corridor addressing the demands of increasing national, regional and trans-national trade, attention has been focused on the following areas:

- Regional connectivity/Transit potential
- CAREC Corridors
- Trans-Asian Railway Network
- ECO Transit Railway

To this end, the following regional rail connections are being developed on economical routes:

- Up-gradation of Quetta-Kohi Taftan Section, (682 Km)
- New rail link for connecting Gwadar Port with existing Railway network at Mastung (901 Km).
- Conversion of Bostan-Zhob Section from NG to BG and providing new rail link between Zhob-D.I.Khan-Kotlajam near Bhakar (505 Km)
- Realignment of track from Kaluwal to Pindora (52 Km)
- New rail link from Havelian (Pakistan) to Khunjrab (Pak-China Border) (682 Km)
- New rail link between Peshawar and Jalalabad (Annexure F-i)
- New rail link between Chaman (Pakistan) to Kandhar (Afghanistan) (107 Km)
- Provision of 3rd and 4th freight lines between Karachi-Kotri (2x165=330 km) Construction of new rail link from Kotla Jam (near Bhakkar) to Peshawar via D.I. Khan, Lakki Marwat, Bannu, Karak & Kohat (377 kM)
- Provision of alternative route to link Sibi with Spezand bypassing Bolan Pass (170 Km).

Additional rail projects include the:

- Track rehabilitation from Landhi to Khanpur, distance 664 km.
- Bridge Rehabilitation Project. 159 bridges have been identified being in acute distress; 109 bridges on the main line (primary “A”, primary “B” section) & 50 bridges on important branch lines (secondary & tertiary section).
- Phase wise replacement of the old signalling system with all relay interlocking system starting from main line.
- Feasibility study for introducing high speed double track between Rawalpindi/Islamabad-Lahore, 250 km/h, has been completed. The proposed high speed line would connect Lahore-Rawalpindi with an alternative route with 3 to 4 intermediate common stations with the existing track. The proposed high speed will reduce the existing time of 4 hours 30 minutes at a speed varying between 65 km/h to 105 km/h due to sharp curves and gradients on hilly areas to 1 : 30 hour.

Recommendations

- The Pakistan Railway Network should serve as the basis for the rail links in the ECO Region with regard to transport Infrastructure.
- Keeping in view the intermodal characteristics of container cargo and the inherent edge of bulk transportation by railways, projects should aim at promoting safe, efficient, environmentally sound and user friendly rail transport services through the member countries.
- Key strategic aims should be;
    - To strengthen the political, social and economic status of the member countries by developing adequate transport networks
    - To ensure an efficient and appropriate extension of existing networks by step by step modernization without affecting the system’s function and services structures.
    - To increase transport safety.
    - To ensure financing of projects that is to coordinate short term investments with long term financial planning.
- In order to develop the international rail transport, consistent investment strategies will need to be implemented by member countries over the next 15 to 20 years. Projects of vital importance should be identified for developing common methodologies and organizational approaches among the member countries.
- Successful development of railway transport services can be obtained by;
    - Promotion of public private partnership (PPP) schemes for appropriate priority projects.
    - Promotion of intelligent transport services by setting up a common ECO Container Train Control System.
    - The use of a common method for economic and financial project assessment.
    - Incorportation of environmental aspects into the overall assessment of networks in projects.

5.7 Tajikistan

Tajikistan is a landlocked and mountainous country, bordering on Afghanistan, Uzbekistan, Kyrgyzstan and China. Due to its geographical disposition, lack of sea and river routes, inadequate development of railway network and aviation, road transport remains the main transport mode. It should be noted that more than 87% of cargo and 62% passenger-transportation are carried by road transport.

The Government of the Republic of Tajikistan signed the Intergovernmental Agreement on Asian Highways (AH), Intergovernmental Agreement on Trans Asian Railway and the Main Multilateral Agreement Europe-Caucasus-Asia (TRACECA), The Republic of Tajikistan is also a member to the UNESCAP, CAREC, SCO, UNECE, and ECO. At the same time, it maintains close cooperation with financial institutions like ADB, IDB, EBRD, World Bank, OPEC Fund, KFAECD in order to develop transport and road sectors. It has also acceded to 5 international conventions.

In accordance with accession and membership of Tajikistan to the above agreements and organizations, the transport sector has been announced as the priority sector of the economy. Therefore, in order to integrate road and railway corridors, crossing the territory of Tajikistan, into the networks of AH, TAR, EurAsEC, TRACECA, and ECO, a number of bilateral agreements.

So far 8 international corridors are crossing the territory of Tajikistan. The routes linking Tajikistan with Afghanistan are of high importance, since they provide access to the ports of Iran and Pakistan, while and access to them depends on Afghanistan. Tajikistan is linking China, the Russian Federation, the Kyrgyz Republic and Kazakhstan to the south sea ports via the Islamic Republic of Afghanistan.

The total extent of the railways of the Rohi Ohani Tojikiston State Unitary Enterprise totals 950,7 km. Due to the country's geographical disposition, the railway infrastructure consists of three sections: northern – at Sogdi oblast, central – Dushanbe city, and southern – at Hatlon oblast. All three sections are isolated from each other and any connection among them can only be realised through the territories of neighboring countries: Uzbekistan and Turkmenistan with total length 700-800 km. This creates a severe economic burden for Tajik Railways. Excessive transport expenditures became the difficult barrier on the way to foreign markets and Tajikistan should solve the problem of tariff barriers. The peculiarity of Tajik Railways lies in the fact that the share of domestic transportation and transit cargoes are not great and the cost of railway transportation depends on tariffs, established by other operators. 92% of exports and 87% of imports of the trade fall on the Tajik Railways.

Finally, the passenger transportation is mainly carried out on the route Tajikistan - Russian Federation by passenger trains: Dushanbe – Moscow, Dushanbe-Astrahan, Kulyab-Astrahan, Hujand – Saratov.

Border Crossing Points

The following border-crossing points are operational:

- Kyrgyzstan (870 km): Oktajabr'sk, Bekabad;
- Uzbekistan (1,161 km): Ajvadz (rail), Sughd Oblast (“Navruzobod”).

National Plans, Policies and Infrastructure Investment

An analysis of current conditions in the railway sector showed that investments in railway infrastructure would be more profitable than in other transport sectors. The realization of the individual plan of restructuring the State Unitary Enterprise “Rohi Ohani Tojikiston” will provide a real opportunity for attracting a private capital to the sector for the following:

- timely replacement of sleepers and ensuring safe movement of trains;
- replacement of worn out rails, pointers and use of rails P-65 with long term usage;
- renovation of parks of locomotives and wagons;
- reconstruction of remounting shops with the aim of lowering extra expenditures related to the use of wagons and locomotives;
- creation of relevant conditions for developing intermodal transportation.

A detailed feasibility and financial study is also planned for the construction of key railway links, such as the Kolhozobad-Nizhniy Pyanj – border of Afghanistan, Vahdat-Karamyk (border of Kyrgyzstan), connection of Tajik Railways (Aivaj) through Afghanistan with the railway of Turkmenistan and North-South providing connection to Sogdi oblast.

For the short-term period, it is planned to:

- continue the construction of Vahdat-Yavan segment for future Dushanbe-Kurgan Tube railway line;
- continue the replacement of sleepers, ballasts and renovation of rails;
- take measures on remounting and maintaining around 150 bridges to prevent corrosion;
- purchase 20 arterial and maneuver locomotives.

For the mid-term period, it is planned to:

- continue works on replacement of sleepers, rails with the focus on renovation of rails;
- undertake reconstruction of 55 bridges;
- purchase seven railway arterial locomotives;
- purchase and restore cargo wagons;
- start construction of Vahdat-Karamyk (border of Kyrgyzstan) and Kolhozabad-Nizhniy Pyanj-border of Afghanistan railway lines;

For the long-term period, it is planned to:

- continue works on replacement of sleepers and rail line taking into consideration renovation of rails;
- reconstruct 10 bridges;
- fully renovate cargo wagons;
- modernize (renovate) locomotive depots;
- start construction of North-South railway line.

5.8 Turkey

The Republic of Turkey with a total area of 814,578 km^2 and 8,333 km of coastal line lies in the main traffic artery between Asia and Europe, having borders with Bulgaria, Greece, Iran, Iraq, Syria, Georgia, Armenia, and Azerbaijan. Turkey is surrounded by the Black Sea on the north and the Mediterranean Sea on the south; it connects the Balkans to the Middle East, Central Asia to the Caucasus and the Black Sea countries with the Mediterranean countries. Turkey's location elevates its transport policies and investments to a prime ranking relative to other policies of the Turkish Republic.

Turkey will adopt the role of being an interconnection between Europe, the countries of the Middle East, the Caucasus region, the littoral countries of the Mediterranean, the Aegean and the Black Seas. The transport infrastructure networks in this region are, therefore, vital to competitiveness, economic growth and employment in Turkey and the entire region. Turkey's unique geographic location offers tremendous multi-modal transport opportunities. To make maximum use of these opportunities priority should be given to:

- Improving transport in the North-South and East-West axes to better integrate Turkish transport with international transport networks;
- Improving intermodal transport facilities and services, to take advantage of the strong growth in container transport; and,
- Improving maritime connections and nodal points (seaports), to take advantage of their potential strategic role as industrial and logistic platforms.

The 10,984 km rail network is predominantly single-tracked (95 per cent) and characterised by mountainous terrain, tight curves and steep gradients. Most lines are single-track and circuitous, while only 19 per cent of rail track is electrified.

The current poor quality of rail infrastructure and rail services in some parts of the national railway network represent a major obstacle to social cohesion and the economic development in that it impedes competitiveness, movement of goods and passengers, business settlements, investment decisions, etc.

With regard to the railways, there are two rail borders on the west providing connection with Europe; one of which (Demirkopru) is with Greece, the other (Kapikule) is with Bulgaria. With regard to the borders on the east, there are three rail borders, one (Dogukapi) with Armenia is closed, another with Georgia will be in operation when the Kars- Aktas Railway project is completed. The last border (Kapikoy) is with Iran and constitutes the most important rail link to Asia. There are also three rail borders on the south, namely, Cobanbey (Syria), Meydanekbez (Syria) and Nusaybin (Iraq).

National Plans, Policies and Infrastructure Investment

The 60th Governmental Plan defines the following with regard to railways:

1- Transport Main Plan Strategy was prepared for ensuring balance among transport modes and railway projects are given priority to develop rail transport faster,
2- Construction of high speed lines between cities of more than 1 million population, where Ankara will be core of high speed rail network,
3- Completion of high speed railway projects under construction along with rail connection under Istanbul Strait (Marmaray Project) will be ensured,
4- Rehabilitation of existing rail network and new conventional railway lines for efficient transport throughout Turkey,
5- Rail connections to ports.

Based on the above, the rail infrastructure priority projects are the following:

1- Ankara – Istanbul High Speed Train Project
2- Marmaray Project
3- Bogazkopru-Mersin-Adana Signalling Project
4- Ankara-Sivas High Speed Train Project
5- Ankara-Izmir High Speed Train Project
6- Eskisehir-Kutahya-Balikesir Signalling Project
7- Samsun-Kalin Modernization Project
8- Malatya – Narli Modernization Project
9- Lake Van New Ferry Procurement (Northern Pass Project)
10- Kayas-Cetinkaya Electrification Project
11- Pehlivankoy-Uzunkopru Modernization Project
12- Bandirma-Menemen Modernization Project
13- Kars-Aktas Railway Project
14- Sivas – Kars Railway Project

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Results Achieved

The present study, "**ECO Railway Network Development Plan"**, as part of the ""ECO Priority Road and Rail Routes and Infrastructure Projects" Study, prepared by the Consultant, achieved the following tangible results:

- Completed an extensive data collection process on transport rail routes and related infrastructure projects, involving the input of National Experts from 8 ECO Member States, namely Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan and Turkey.
- Identified 5 Priority Rail Routes in the ECO region with related branches and extensions.
- Developed a database from extensive data collection, listing the rail infrastructure projects per country, together with key information regarding their location with regard to the identified routes, current status, start and end dates, cost and sources of financing, etc.
- Developed the ECO Rail Transport Network Development Investment Plan and Time Plan by prioritizing 40 investment projects of total cost of approximately $43,4billion along a total length of approximately 12,298 km of railway lines.
- Drafted Country Reports for each participating country detailing current conditions on rail transport infrastructure, as well as National Transport Plans.

The ECO Priority Rail Routes identified by the study could form the basis for the development of an interregional backbone rail network with extensions to neighbouring countries and regions. They constitute a promising prospect for transportation in the ECO region and neighbouring countries, primarily taking into account the vast transit traffic capacity potential of land routes through northern Eurasia, which at present are very much under-utilised. Hence, the development of these proposed ECO Rail Routes would provide additional Euro-Asian transport solutions to the existing maritime and at the same time become a development tool for many countries in the ECO region, particularly the landlocked ones.

It is acknowledged that the implementation of the proposed ECO Rail Network is a long-term process that requires first and foremost all political will and commitment from all the countries involved. To see it to fruition will also require continuous close cooperation amongst the ECO Member Countries, between them and their immediate neighbouring countries, their respective National Experts and the ECO Secretariat.

To this end, a number of actions could be recommended with regards to data collection, monitoring, GIS Mapping update/maintenance, continuous revision/update of the Investment Plan and funding securisation, as well as certain technical and institutional actions.

The provision of transport infrastructure is a necessary, but not sufficient condition for the movement of international trade and the efficient operation of the ECO Priority Rail Routes, since obstacles and bottlenecks occur, particularly at borders, due to the lack of policy and administrative interoperability and harmonisation. It is vital that transport facilitation be addressed in an integrated manner by all the authorities concerned and in direct partnership with the private sector.

6.2 Recommendations

Based on the above, the study culminates in a set of recommendations, classified into three areas, namely, infrastructure and services, facilitation, and policy, which address the current impediments to seamless transit traffic, with the scope to set the basis for the development of strategic action plans at national, bi-lateral and international (ECO) level.

Infrastructure and services

Adoption of identified ECO Priority Rail Routes

Considering the fact that the countries that participated in the present study through their National Experts have contributed to the identification of the priority ECO Rail Routes, it is of the outmost importance that they agree on the selected rail routes and continue to support their realisation, concentrating their efforts in integrating their national transport networks with the priority identified routes.

National Master Plans

The development and endorsement of the ECO Priority Rail Routes and rail projects identified by the present study should be based on national Master Plans and funding possibilities, elaborated by the ECO participating governments, while taking into account the existing sub-regional, regional and interregional agreements on rail infrastructure.

Funding Securization

An important factor in the realization of the ECO Rail Network identified is the securization of funds to be used for the implementation of the proposed infrastructure projects. To this end, finalisation of the funding situation of the network regarding unfunded projects and examination of possible sources of funding is required. In addition, the eligibility criteria for the respective countries to receive funds, as well as analysis of the required procedures should be indentified. Funding sources to be examined are (non-exhaustive list):

- National financing.
- Banks, such as the Asian Development Bank (ADB), Islamic Development Bank (IDB) and the World Bank. In addition, any national development banks should be identified that could potentially finance the realisation of infrastructure.
- The EU Development Assistance programme, the Central Asia Regional Economic Cooperation (CAREC), Organization of the Black Sea Economic Cooperation (BSEC).

- Private sector participation: alternative funding schemes, such as Public-Private Partnership (PPP) schemes (i.e. BOT) for infrastructure delivery and operation, as well as PFIs for services/operations delivery.
- Cross-border financing.

Data Collection and Monitoring

The main difficulty when presenting the complete shape of the proposed ECO Priority Rail Network and related development plan was the lack of adequate information on technical, traffic/transport, economic/financial data and funding issues. In order to provide an accurate and realistic information on the actual level of the investment expenditure required to complete the ECO rail network, the countries with incomplete data and those that did not submit any information are encouraged to timely provide this information so that the evaluation exercise can be completed. In addition, monitoring of the ECO Priority Rail Routes performance and projects' implementation is required through transparent measures aimed at:

- Observing, measuring, recording, collating, processing information for necessary decision/action.
- Providing information on the state of play of programme/project in direct comparison to original plan and costs.
- Identifying constraints to implementation and suggesting solutions.
- Securing the involvement of stakeholders
- Enhancing efficient management of resources, accountability, transparency

Based on the above, it is recommended that National Experts participating countries submit data on a continuous basis to the ECO Secretariat.

Synergies and concerted actions

Synergies and coordinated actions should be explored amongst countries in terms of infrastructure implementation, as well as coordinating implementation time periods in particular, in order to ensure consistency, infrastructure continuity, interoperability, seamless transport and reduce potential risks of marginalization of hinterlands and landlocked countries.

Operation and Services

Apart from the provision of infrastructure, the operationalization of the identified ECO Priority Rail Routes and related provision of transport services is of equal importance for the creation of an efficient and seamless rail network. To this end, it is recommended to perform corridor specific operational profiles for the identified ECO Rail Routes, which could identify the impediments to transit traffic and set the ground for developing action plans. Routes studies should indicatively explore, amongst others, the following:

- Operational and technical characteristics along routes (length of trucks, length of trains, axle weight, gradient, speed etc.)
- Travel time

- Prices/travel cost
- Frequency of services
- Supply chain and logistic services
- Terminals/Transhipment centres capacity, charges and services

Facilitation

It is vital that transport facilitation be addressed in an integrated manner by all the authorities concerned and in direct partnership with the private sector with a considerable emphasis on technical and administrative harmonisation. More specifically, the following recommendations are provided with regard to facilitation:

- Accession to international conventions and agreements
- Harmonization of rules and regulations
- Synchronising Customs Procedures
- Visa formalities
- Ensuring interoperable systems
- Build Human and Institutional Capacity
- Trade facilitation

Policies

In order to achieve the goal of successfully building and operating an efficient and sustainable ECO Rail Network, the infrastructure and facilitation measures mentioned in the above need to be embedded in a sound policy framework. Therefore, a number of policy recommendations for the both the ECO participating countries, as well as the international organizations concerned are provided:

1. The ECO Study project results of both infrastructure and facilitation measures should be brought to the attention of the appropriate bodies in the ECO Secretariat for consideration of potential follow-up actions in the framework of their regular legislative and normative work.

2. The establishment of a suitable mechanism ensuring efficient coordination and monitoring of activities related to the proposed ECO priority network should be considered.

3. Due to the strong commonalities between various network infrastructures, what should be considered “best practices” on developing rail transport infrastructure and facilitation of international transport in Asia from national governments and international organizations should be assembled and disseminated. To this end, it is proposed to identify areas and promote concerted actions with other related parties, such as UNESCAP, OSCE, BSEC, Islamic Development Bank, Asian Development Bank, World Bank, EBRD, EurAsec, CAREC, European Commission, SCO, with regard to regional integration transport activities and rail projects implemented by international regional and sub-regional organizations and concerned bodies. The feasibility for rail and intermodal

transport network agreements should also be examined, subject to available funding.

In addition, and subject to available funding, cooperation should be promoted in support of related ongoing or new initiatives and projects:

- UNECE-UNESCAP Euro-Asian Linkages Project
- TER and EU TEN-T with regard to transport corridor and networks
- North South rail – sea route (Russia Federation, Iran, India)

4. It is recommended to build an ECO Observatory to serve as an information centre for intermodal transport infrastructure investments and operations along the identified corridors, and provide a forum for the exchange of views among all interested stakeholders, related bodies and participating countries. The operating modalities of the observatory could be decided jointly by the ECO Secretariat and National Experts of participating countries. This would allow the best exploitation of the study's results and outputs.

5. Promote the dissemination and awareness of the "ECO Railway Development Plan Study" by commencing an official dialogue with other international bodies (UN, European Commission, BSEC, IRU, etc) and International Financing Institutions (Islamic Development Bank, Asian Development Bank, World Bank, EBRD) endorsing the work and for information exchange.

6. With regard to the alleviation of non-physical bottlenecks, the following are recommended:
   - Government and border control agencies need to eliminate the mismatch between public and private companies interests and formally create partnerships to develop measures agreed by both parties.

   - Government and border control agencies need to develop policies, which link the modernization of rail transport and border crossing point hard infrastructure with the development and implementation of international good practice procedures in terms of harmonisation and interoperability.

ANNEX I

TOR FOR NATIONAL EXPERTS

TOR FOR NATIONAL EXPERTS

FOR PREPARATION OF COUNTRY REPORT

ON PRIORITY RAIL ROUTES AND STATUS OF RAIL TRANSPORT INFRASTRUCTURE PROJECTS

AS ENVISAGED BY THE "CORRIDOR MANAGEMENT STUDIES FOR THE PROJECT MANAGEMENT UNIT (PMU) UNDER THE AEGIS OF THE JOINT ECO/IDB PROJECT ON IMPLEMENTATION OF THE TTFA"

The terms and conditions of the National Expert for this assignment are described in the following:

1. Identifying the main rail transport corridors in the ECO region for priority development and cooperation.
2. Identifying the priority rail transport infrastructure projects along the designated routes.
3. Consolidating information of the above Tasks 1 and 2 in pre-defined Tables/Questionnaires for:

4. **ECO Routes/Corridors preparation of :**
    a. Table 2-Rail transport

5. **Infrastructure priority project data per each transport mode preparation of Templates A:**
    a. Template B: RAIL and related infrastructure/services Project Fiche

6. Analyzing the status of implementation of the rail transport infrastructure projects along the corridors and routes designated.
7. Identifying the barriers for effective funding/ implementation.
8. Preparing a short country report about the National Transport plans for rail transport until 2025 (other information in addition to existing national plans could be included).
9. Providing recommendations on potential sources of funding for the cases of non-secure funding, if applicable.
10. Attending meetings, if required.

FORMAT FOR PREPARATION OF COUNTRY REPORT

ON PRIORITY RAIL ROUTES AND STATUS OF RAIL TRANSPORT INFRASTRUCTURE PROJECTS

AS ENVISAGED BY THE "CORRIDOR MANAGEMENT STUDIES FOR THE PROJECT MANAGEMENT UNIT (PMU) UNDER THE AEGIS OF THE JOINT ECO/IDB PROJECT ON IMPLEMENTATION OF THE TTFA"

PART ONE: ECO ROUTES/CORRIDORS FOR RAIL TRANSPORT

1. Introduction
2. Rail transport

PART TWO: RAIL TRANSPORT INFRASTRUCTURE INVESTMENT PRIORITY PROJECTS

1. Introduction
2. Rail transport infrastructure and services

PART THREE: COUNTRY REPORT

PART FOUR: RECCOMMENDATIONS

Guidelines for preparation of the Report

PART ONE: <u>ECO ROUTES/CORRIDORS FOR RAIL TRANSPORT</u>

The purpose of this part is to obtain a picture of the main transport routes/corridors within the ECO territory for priority development and cooperation. As the main objective of the project is the development and promotion of an intermodal transport network linking the ECO countries, please identify the following in the ECO territory:

- Rail links and rail border crossings

The following guidelines are suggested for the selection of the routes:

1. Proposed links/routes should be of international importance for transport between the ECO countries
2. Proposed links/routes should connect to the proposed ECO routes
3. Please spell towns/stations/ports according to the nomenclature used in international agreements.
4. Please provide figures for *Annual Average daily traffic, trains per day, total annual cargo* for the year 2010 and latest year, if available.

We realise that the level of detail of the network is difficult to assess in terms of which links and nodes to include. Please make a decision with regard to the length of the respective links, based on your data availability, keeping in mind, however, some minimum criteria, such as..

2. Rail Transport Infrastructure

Please fill in the following table.

From City	To city	Length (km)	Track gauge (mm)	Number of tracks (DT= double, ST= single)	Traction (E= electrified, NE=non-electrified)	Max. load per axle (tonnes)	average speed pass-trains	average speed cargo trains	Moved Cargo Tonnes/	trains per day (cargo/ Pass/ Mixted)	Annual Forecast Increase of cargo %	Forecast Annual Increase of passenger %	Is it a Missing links or bottleneck ? (YES/NO)

PART TWO: RAIL TRANSPORT INFRASTRUCTURE INVESTMENT PRIORITY PROJECTS

An integral part of the study is the identification of the priority transport infrastructure rail projects, which are either planned for implementation or already under construction, along the designated routes/corridors identified under PART ONE, with the scope to develop an international investment plan for the ECO countries.

For each rail transport infrastructure project identified, please:

1. Fill in Template B.
2. Analyze the status of implementation of the rail transport infrastructure projects.
3. Identify the barriers for effective funding/ implementation, if applicable.

Guidelines for the completion of Templates A, B, C, D and E

- Please use ONE SHEET per PROJECT
- SECTION 1- Project technical characteristics and financial information*: Please describe technical design characteristics of existing situation and after the project, if changed.*
- SECTION 2- Project Information Concerning Criterion: *To be completed only for non-funded projects*
- SECTION 3-Project Financial Information: *To be completed for ALL projects*

TEMPLATE B – Rail and related infrastructure Project Fiche

Project Name: **Project ID:** **ECO ROUTE NUMBER:** **Project Description:** **Contact address/details:**
Section 1: Project Technical Characteristics Location (latitude/longitude or alternatively a map): Start point/node/city End point/node/city
Section 2: Project Information Concerning Criteria **ON-OFF CRITERION**: Serve for the development of a transport corridor within the ECO countries YES ☐ NO☐ , **IF YES, PLEASE PROCEED:** Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☐ NO If yes, the magnitude of impact is: **A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.**

Section 3: Project Financial Information

Project costs (in million$):
Expected Starting Date:
Expected Completion Date:
IRR:
Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design
☐ Planning ☐ Identification
Expected Funding Sources (and the % of funding for each one):
National Funds: …
Foreign aid:…
Bank loans: …
Grants: …
Private Funds (PPP basis). Please provide details……..…
Other….
Foreign cooperation sought? ☐ YES ☐ NO
If yes, please describe…….
Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..
Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
…….
Reasons for which project implementation has been delayed, (if applicable)…..
Any relevant Documentation?
Pre-feasibility study…….. ☐
Feasibility study…….. ☐
Technical Studies (Design etc)…… ☐
Other……
Other project-related information?.....

***If not available for 2010, please insert the latest year**

PART THREE: COUNTRY REPORT

Please provide a short country report about the National Transport for rail transport plans until 2025.

You may add your own information in addition to existing national plans or any other issue you consider important for the study.

PART FOUR: RECOMMENDATIONS

Please provide recommendations on potential sources of funding for the cases of non-secure funding, if applicable.

ANNEX II: PROJECT DATABASE

Rail Infrastructure Projects along identified ECO Priority Routes

Rail Infrastructure Projects of national importance

AFGHANISTAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
	AFG-RLW-01	Survey, design, and construction of fourth section of rail way from Khawf to Herat	Khawf	Herat	62															
2B	AFGRLW-02	Survey, design, and construction of second phase of rail way from Kundoze to Shirkhan Bandar	Kundoze	Shirkhan Bandar	65						unknown	3 years		120		no funding yet				
1-B-F	AFG-RLW-03	Survey and Construction of rail way from Turkham to Jalalabad	Turkham	Jalalabad	75						2011	2013		130		X				
	AFG-RLW-04	Survey, design, and construction of second phase of rail way from Mazar – e – Sharif – Shibirghan – Aqina = 220 km	Mazar	Aqina	220						unknown	2 years		1166		no funding yet				

AZERBAIJAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
3	AZE-RLW-01	The construction of the railway line of Astara-Iranian border across the North-South transport corridor	Astara (Azerbaijan)	Astara (Iran)	8,3		2150 trains/year (year 2015)		6 354 448 ton/year (year 2015)	Planning	After completion of the construction of the railway line Qazvin-Rasht-Astara (Iran)			not yet specified						
	AZE-RLW-02	Reconstruction and rehabilitation of Baku – Boyuk-Kesik (Georgian border) railway of the project Baku-Tbilisi-Kars	Baku	Boyuk-Kesik (Georgian border)		3630 trains/year (year 2015)		15290986 ton/year (year 2015)		Study										

IRAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
1,2A,2B	IRN-RLW-01	The route starts from Miyaneh existing station (along Tehran-Tabriz railway), passes mainly through mountainous areas and reaches Tabriz existing station.	Tabriz	Miyaneh	205	7 up passenger trains/day	4 M in the 10th year of operation	12 up freight trains/day	6 MT in the 10th year of operation	Construction	2001	2014	370 Million Euros	487,29	30%		x			7,50%
3	IRN-RLW-02A	Construction of two routes: Qazvin-Rasht-Anzali and Rashat – Astara - The project serves to connect Gilan Province, Anzali port and Astara Border to the country rail network	Qazvin	Anzali Port	205		About 2 Million in the 10th Year of operation		5.5 M in the 10th Year of operation	Tendering	2002	2014	250 M Euros	329,25	27%	x			PPP basis (BOT)	
	IRN-RLW-02B		Qazvin	Astara Border (between Iran and Azerbaijan)	167				2.4 M in the 10th Year of operation	Tendering	2010	2015	195 M Euros	256,815						
4	IRN-RLW-03	The route starts in Iran and continues to Turkmenistan and ended in Khazakhstan	Gorgan	Inchehbrun	82					Construction	2009	2012				x			PPP basis	
	IRN-RLW-04	At present a rail link is available between Emam Khomeini Port –Ahvaz-and Khorramshahr Port with the length of 232 km. The new line shall cut the route length by 118 km and significantly improves freight and passenger traffic.	Emam Khomeini Port	Khorramshahr	114		more than 3 M		7 M	Construction										
1-B-D	IRN-RLW-05	Electrification of Bafq-Bandar Abbas	Bafq	Bandar Abbas Station	620	10 passenger trains/day	4725	30 freight trains/day	21690	Quality evaluation is under process (B.O.T)	2012	2016		560	5%		100%			19%
2	IRN-RLW-06	Electrification of Tehran-Mashhad	Tehran	Mashhad Station	926	60 passenger trains/day	20067	20 freight trains/day	5.930		2012	2014		1200	2%	15%	85%			
2A-B-F	IRN-RLW-07	The route will starts from Torbat e Heidarieh , stretches towards Ma'dan Sangan (Khaf) and ended in Herat	Khaf	Herat	191 (76 km in Iran territory and 115 km in Afganistan)		500000 at the 10th year of operation		6 M at the end of 10th year of operation	Construction	2005	2012		141,28	50%					
1-E-A	IRN-RLW-08A	Arak-Kermanshah-Khosravi	Samangan station near Arak	Kermanshah	566		2.3 M (Samangan-Kermanshah) and 2 M (Kermanshah-Khosravi) in the 10th year of operation			Construction	2001	2013		670	30%	x			Private sector investment is welcome	
	IRN-RLW-08B		Kermanshah	Khosravi (border of Iran and Iraq)					2 M in the 10th year of operation		2012	2016								
1-B-E	IRN-RLW-09	Chabahar-Zahedan Railway	Chabahar	Zahedan	570					Construction		2014	3 billion euros	3951						

KAZAKHSTAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
4	KAZ-RLW-01	Electrification section of the Makat-Kandyagash	Makat	Kandyagash	392					Planning	is not defined	is not defined		240					100%	
2A	KAZ-RLW-02	Electrification section of the Dostyk - Aktogai	Dostyk	Aktogai	309					Planning	2009	2012*		546						
2A	KAZ-RLW-03	Electrification section of the Almaty - Aktogai	Almaty	Aktogai	541,4						2009	2013*		1054,4						
	KAZ-RLW-04	Increasing transport capacity of railway lines. Enhanced line Atyrau-Beineu by strengthening individual sections: Atyrau-Makat (21.1 km), Makat-Kulsary and Kulsary-Beineu 77.8 km	Atyrau	Beineu	98,9					Planning	is not defined	is not defined		no information						
5	KAZ-RLW-05	Construction of second tracks at sunset stretches on sections Iletsk – Zhaisan and Kyzylorda – Shieli	Iletsk	Shieli	47,2					Planning	is not defined	is not defined		no information						
	KAZ-RLW-06	Increasing transport capacity of the railway line Nikel'tau-Makat through phased construction of the second track on sunset stretches. Up to 2015 – strengthening land line Nikel'tau – Makat (180.5 km); after 2015 - Nikel'tau-Makat (163.2 km)	Nikel'tau	Makat	343,7					Planning	is not defined	is not defined		no information						
2A	KAZ-RLW-07	Increasing transport capacity of the railway line Shu-Almaty	Shu	Almaty						Planning	2012 (is not defined)	is not defined		no information						
4	KAZ-RLW-08	Construction of a new railway Uzen- border of Turkmenistan - This project aims at the creation of additional transit routes directly connecting Kazakhstan and central regions of Russia, Turkmenistan, Iran, Persian Gulf countries, South and South-East Asia	Uzen	border of Turkmenistan	146					Construction	2009	2011		442						

KYRGYZSTAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
5-E-B	KGZ-RLW-01	China-Kyrgyk-Uzbek trunk railway project - Project's main idea is a creation of south corridor of Eurasian transcontinental trunk railway, which is to connect pacific ports with Persian Gulf and Mediterranean getting through the territory of Kyrgyzstan.	Kara-Suu	Torugart	268,4					Planning	2012	2018		2000			100%			6,06
	KGZ-RLW-02	"Balykchy-Kochkor-Kara-Keche-Arpa" railway project - Project's main goal is connection of currently separated railways on the north and south of Kyrgyzstan and creation of internal network of railways.	Balykchy	Arpa	358					Planning	2013	2019		not determined			100%			

PAKISTAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST (mio Rs)	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	End point/node/ city	Total Length (km)	Existing Average Annual Daily Traffic (AADT)	Expected Traffic Increase	Existing Average Annual Daily Traffic (AADT)	Expected Traffic Increase	Construction, Tendering, Study/Design, Planning, Identification	Start year	End year				National Funds	Foreign Aid	Bank Loans	Private Funds	
1	PAK-RLW-01	Up-gradation of Quetta-Kohi Taftan section which will be an important part of the international route starting from China to Europe as conceived under Trans Asian South Corridor.	Quetta	Taftan	682								57355	625,1695						
1-B-I	PAK-RLW-02	New rail link for connecting Gwadar Port with existing Railway network at Mastung. The rail link is considered absolutely essential for the optimum operationof the port to transport the goods from the port to up country and neighboring stated i.e. Afghanistan, Iran, and Central Asian Republics.	Gwadar Port	Mastung	901								182268,4	1986,72556						
	PAK-RLW-03	Conversion of Bostan-Zhob section from NG to BG and providing new rail link between Zhob-D.I. Khan-Kotlajam (Near Bhakkar). The project is designed to provide an alternative link of Quetta with Peshawar via D.I.Khan, Bannu and Kohat.			505		4,25 million passengers (year 2030)		3,14 million ton (year 2030)				73000	795,7						
	PAK-RLW-04	Realignment of track from Kaluwal to Pindora	Kaluwal	Pindora	52								12900	140,61						
1-E-F	PAK-RLW-05	New rail link from Havelian (Pakistan) to Khanjurab (Pak-China Border). It would provide a direct link between Pakistan and China, which mutual trade is bound to grow manifold in the future. The project would provide an opportunity to create a new international corridor to link China, Central Asian States and Russia.	Havelian	Khanjurab	682								879780	9589,602						
1-B-F	PAK-RLW-06	New rail link between Peshawar and Jalalabad. It will boost up trade and strengthen socio cultural relations between Pakistan and Afghanistan. It will provide new opportunities to exlpore the vast market of Central Asia and even Russia.	Peshawar	Jalalabad									to be determined after completion of feasibility study							
1-B-H	PAK-RLW-07	New rail link between Chaman (Pakistan) to Kandhar (Afghanistan). It will provide access to Pakistani sea ports and as such, this route would be one of the busiest and important links between the two neighboring countries.	Chaman	Kandahar	107								13588	148,1092						
1-B-G	PAK-RLW-08	Provision of 3rd and 4th freight lines between Karachi-Kotri.	Kotri	Karachi	330								16929	184,5261						
	PAK-RLW-09	Construction of new rail link from Kotla Jam (near Bhakkar) to Peshawar via D.I.Khan, Lakki Marwat, Bannu, Karak and Kohat. The proposed link will drastically reduce the travel distance. It would provide passenger and freight facilities to the under developed and remote areas of Khyber Pakhtoon Khawa.			337		10,6 million passenegers (year 2030)		8,88 million ton (year 2030)				67370	734,333						
1	PAK-RLW-10	Provision of alternative route to link Sibi with Spezand bypassing Bolan pass.			170								27200	296,48						

TAJIKISTAN

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
2B	TJK-RLW-01	Construction of new railway line Ayvaj(Tajikistan) – Taganguzar – Khulm – (Afganistan). It will allow the transportation of goods and passengers within Tajikistan territory from Russia, Kazakhstan and other interested CIS countries, as well China through Afghanistan to Iran, India, Pakistan, Turkey and others.	Ayvaj	Bridge to Afghan border	4					Planning				30,4			X			
2B	TJK-RLW-02	Construction of Kolkhozabad-Nijniy Pyanj-Kunduz (Afghan border). It aims to create new transportation opportunity for the country and allow other countries to reach Afghanistan using transit potential of Tajikistan.	Kolkhozabad	Nijniy Pyanj	50					Planning				90						
2B	TJK-RLW-03	Construction of Vahdat – Karamyk railway. It will create a new railway network connecting China with Iran through the territory of Kyrgyzstan-Tajikistan and Afghanistan	Vahdat'ilyak station	Karamyk (border point with Kyrgyzstan)	296					Planning				3000						

TURKEY

ECO ROUTE NUMBER	PROJECT ID	PROJECT DESCRIPTION	PROJECT LOCATION			TRAFFIC VOLUMES (passenger)		TRAFFIC VOLUMES (freight)		CURRENT STATUS	TIME PLAN		TOTAL COST (mio euro)	TOTAL COST (in mio USD)	EXPENSES so far (in % of total cost)	% FUNDING SECURED (or possible funding sources)				IRR / (ROE if PPP)
			Start point/node/ city	*End point/node/ city*	*Total Length (km)*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Existing Average Annual Daily Traffic (AADT)*	*Expected Traffic Increase*	*Construction, Tendering, Study/Design, Planning, Identification*	*Start year*	*End year*				*National Funds*	*Foreign Aid*	*Bank Loans*	*Private Funds*	
	TUR-RLW-01	Sivas-Erzincan-Erzurum-Kars railway project	Sivas	Kars	710	for the time being 12		for the time being 30		Study/Design	2010	2014		4000						
1,2A,2B	TUR-RLW-02	Ankara – Istanbul High Speed Train Project	Ankara	Istanbul	533	for the time being 22 HST between Ankara-Eskisehir	780% -after project completion, it is expected to carry 9 million			Construction	2003	2013	2820	3713,94	70%	7%		93%		Economic IRR 6,8%
1,2A,2B	TUR-RLW-03	Marmaray Project - It covers the railway line between Halkali – Sirkeci (Istanbul) – Tube Tunnel under Istanbul Strait - Haydarpasa (Istanbul) – Gebze	Gebze	Halkali	76,7					Construction	2004	2013	3825	5037,525		10%		90%		
1,2A,2B	TUR-RLW-04A	Bogazkopru – Ulukisla, Ulukisla-Yenice, Mersin – Adana – Toprakkale Signaling, Telecommunication and Station Extension Project The existing railway line will be rehabilitated with station loop extensions, new signaling and telecommunication systems will be installed during the years 4 2009 – 2012.	Bogazkopru (Kayseri)-Ulukisla-Yenice	Mersin-Yenice-Adana-Toprakkale	438	2 trains/day	25-30%	12 trains/day	25-30%	Construction	2008	2012	136,25	179,44125	28%	15%		85%		Economic IRR 128%, Financial IRR 110%
1-B-B, 2A-B-B, 2B-B-B	TUR-RLW-04B	Electrification Project - new electrification system will be installed along the route during the years of 2011 – 2015.									2011	2015	68	89,556						
1,2A,2B	TUR-RLW-05	Ankara-Sivas High Speed Train Project - new double track high seed line with signalling, electrification and communication systems will be constructed, 461 km in length, along with constituting the East-West axis in the high speed train line and shortening of the current traveling time from 12 hours to 3 hours.	Ankara	Sivas	461	for the time being 10		for the time being 10		Construction	2007	2014	1102	1451,334	16%	100%				10%
	TUR-RLW-06	Ankara-Izmir High Speed Train Project - new double track high seed line with signalling, electrification and communication systems will be constructed through Polatli - Afyonkarahisar.	Ankara (Polatli)	Izmir	663	114 trains/day				Tendering	2010	2015		2350		100%				Economic IRR 29,14%, Financial IRR 7,73%
1-B-C, 2A-B-C, 2B-B-C	TUR-RLW-07A	Eskisehir - Kutahya - Balikesir Signalling & Telecommunication Project will be realized during the years of 2011 – 2015.	Eskisehir	Balikesir	318	31 trains/day	25-30%	14 trains/day	25-30%	Construction	2011	2015	110	144,87						2%
	TUR-RLW-07B	Electrification project will be installed along the route during the years of 2012 – 2016.									2012	2016	70	92,19						
1-B-A, 2A-B-A, 2B-B-A	TUR-RLW-08A	Initially Technical Assistance Project will be realized to facilitate the modernisation of the existing railway infrastructure between Samsun and Kalin.	Samsun	Kalin (Sivas)	382,5	for the time being 8	25-30%	for the time being 23	25-30%	Study/Design	2012	2013	136	179,112		15%	85%			
	TUR-RLW-08B	Samsun - Kalin Modernization Project - Initially Technical Assistance Project will be realized to facilitate the modernisation of the existing railway infrastructure between Samsun and Kalin.									2013	2016								
	TUR-RLW-09A	Initially Technical Assistance Project will be realized to facilitate the modernisation of the existing railway infrastructure between Malataya and Narli.	Malatya	Narli	198	for the time being 5	25-30%	for the time being 30	25-30%	Study/Design	2013	2014				15%	85%			
	TUR-RLW-09B	Malatya - Narli Modernization Project - The overall objective of the project to improve the railway infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by the modernisation of the existing railway line Malatya-Narli, upgrading Signalling, Telecommunications & Electrification systems, expanding the Stations.									2014	2017								
1,2A,2B	TUR-RLW-10	Lake Van New Ferry Procurement (Northern Pass Project) - The overall objective of the project to improve the infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by procurement of new ferries and upgrading existing piers.	Tatvan	Van	80	for the time being 4		for the time being 6		Construction	2006	2011	60,5	79,6785	31%	100%				
1,2A,2B	TUR-RLW-11	Kayas – Cetinkaya Electrification Project	Ankara (Kayas)	Cetinkaya	702	10	25-30%	10	25-30%	Study/Design	2011	2015	88	115,896		x		x		
1,2A,2B	TUR-RLW-12	Pehlivankoy - Uzunkopru –Border with Greece Modernization Project, the whole line section consisting of 30 km single track will be signalled and its infrastructure will be upgraded for higher operational speed and higher line capacity.	Border with Greece	Pehlivankoy	30	8	25-30%	12	25-30%	Tendering	2010	2012	12,9	16,9893		100%				22,9%
	TUR-RLW-13	Bandirma-Menemen (Izmir) Modernization Project the whole line section consisting of 341 km single track will be signalled, electrified and its infrastructure will be upgraded for higher operational speed and higher line capacity.	Bandirma	Izmir (Menemen)	341	Bandirma – Balikesir 4 Trains/Day, Balikesir - Manisa 12 Trains/Day, Manisa – Izmir 18 Trains/Day	25-30%	Bandirma – Balikesir 25 Trains/Day, Balikesir - Manisa 9 Trains/Day, Manisa – Izmir 20 Trains/Day	25-30%	Study/Design	2011	2015	104	136,968						20%
	TUR-RLW-14	Kars - Aktas Railway Project	Kars (Mezra)	Aktas	76	6		12		Construction	2006	2012	166	218,622		100%				Economic IRR 16%, Financial IRR 9,37%

ANNEX III: MAPS

Figure III-1: ECO RAIL ROUTE 1

Figure III-2: ECO RAIL ROUTE 2A

Figure III-3: ECO RAIL ROUTE 2B

Figure III-4: ECO RAIL ROUTE 3

Figure III-5: ECO RAIL ROUTE 4

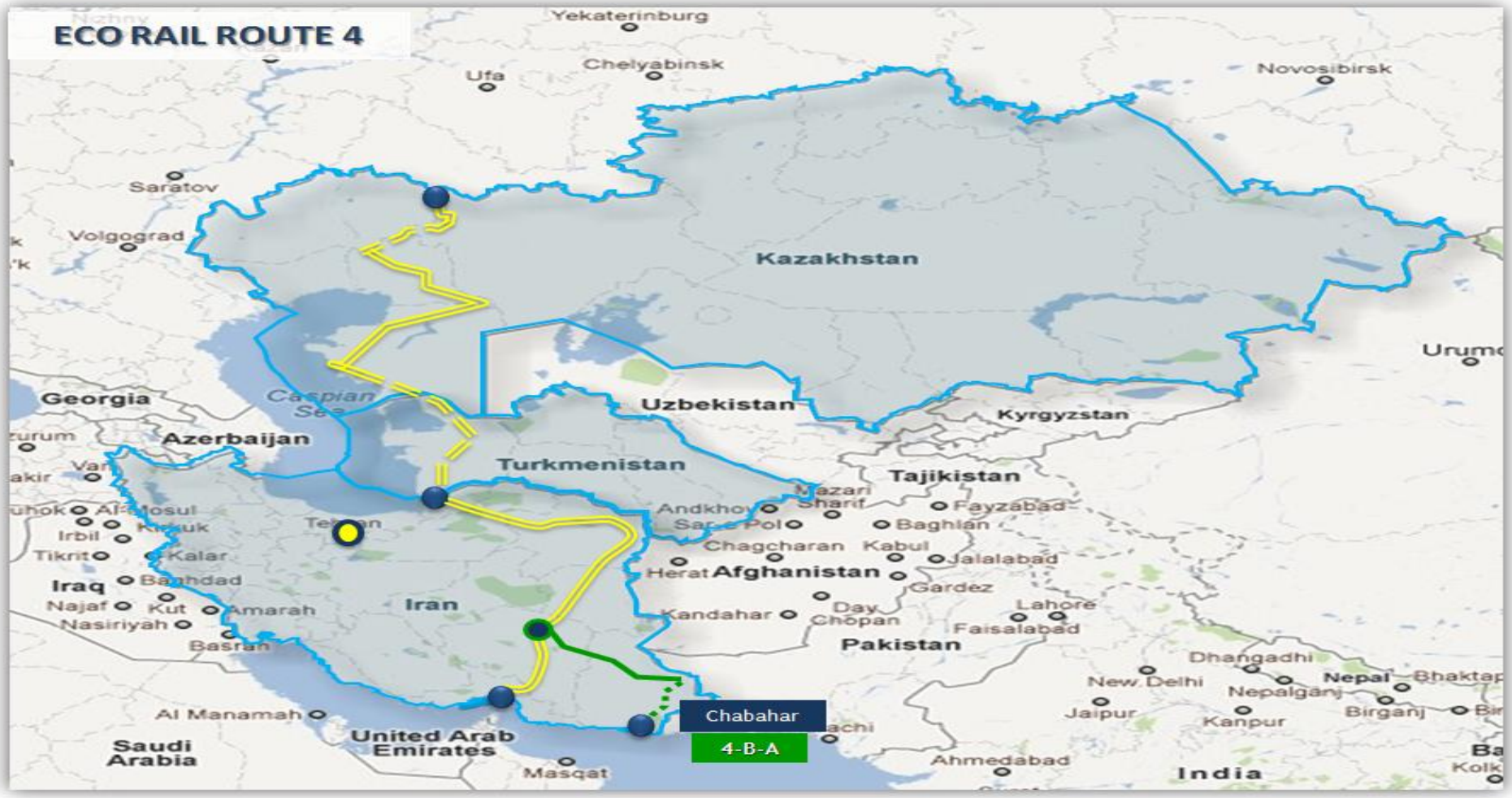
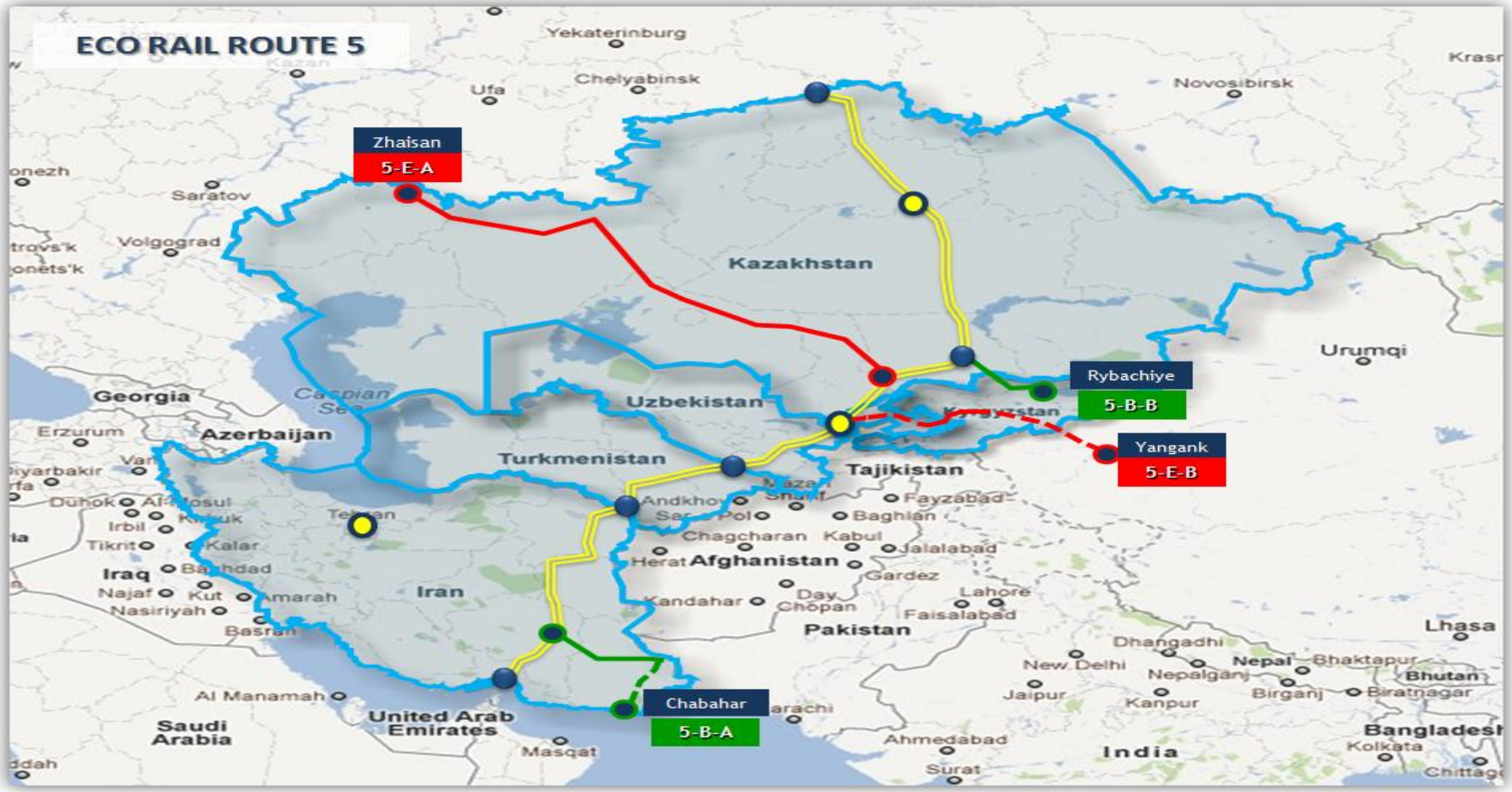


Figure III-6: ECO RAIL ROUTE 5



ANNEX IV:EVALUATION RESULTS

IRAN

1. Answers (based on country's input)

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
IRN-RLW-02A	Y	A	A	B	A	A	A	A
IRN-RLW-02B	Y	A	A	B	A	A	A	A
IRN-RLW-05	Y	A	E	A	A	B	A	A
IRN-RLW-06	Y	A	E	A	A	A	A	A

2. Raw scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
IRN-RLW-02A	5	5	5	4	5	5	5	5
IRN-RLW-02B	5	5	5	4	5	5	5	5
IRN-RLW-05	5	5	1	5	5	4	5	5
IRN-RLW-06	5	5	1	5	5	5	5	5

Weights	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
	20,00%	15,00%	10,00%	15,00%	10,00%	10,00%	10,00%	10,00%

3. Weighted scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
IRN-RLW-02A	1,00	0,75	0,50	0,60	0,50	0,50	0,50	0,50
IRN-RLW-02B	1,00	0,75	0,50	0,60	0,50	0,50	0,50	0,50
IRN-RLW-05	1,00	0,75	0,10	0,75	0,50	0,40	0,50	0,50
IRN-RLW-06	1,00	0,75	0,10	0,75	0,50	0,50	0,50	0,50

Project ID	Project Total Scores	Evaluation Categories
IRN-RLW-02A	4,35	*II*
IRN-RLW-02B	4,35	*II*
IRN-RLW-05	4,00	*II*
IRN-RLW-06	4,10	*II*

KYRGYZSTAN

1. Answers (based on country's input)

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
KGZ-RLW-01	Y	A	A	A	A	A	B	B

2. Raw scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
KGZ-RLW-01	5	5	5	5	5	5	4	4

Weights	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
	20,00%	15,00%	10,00%	15,00%	10,00%	10,00%	10,00%	10,00%

3. Weighted scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
KGZ-RLW-01	1,00	0,75	0,50	0,75	0,50	0,50	0,40	0,40

Project ID	Project Total Scores	Evaluation Categories
KGZ-RLW-01	4,40	*II*

PAKISTAN

1. Answers (based on country's input)

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
PAK-RLW-01	Y	A	C	B	B	B	A	C
PAK-RLW-02	Y	A	C	B	B	B	A	C
PAK-RLW-05	Y	A	C	A	B	B	A	C
PAK-RLW-06	Y	A	A	A	B	B	A	C
PAK-RLW-07	Y	A	A	A	B	B	A	C
PAK-RLW-08	Y	A	C	B	B	B	A	C
PAK-RLW-10	Y	A	A	A	B	B	A	B

2. Raw scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
PAK-RLW-01	5	5	3	4	4	4	5	3
PAK-RLW-02	5	5	3	4	4	4	5	3
PAK-RLW-05	5	5	3	5	4	4	5	3
PAK-RLW-06	5	5	5	5	4	4	5	3
PAK-RLW-07	5	5	5	5	4	4	5	3
PAK-RLW-08	5	5	3	4	4	4	5	3
PAK-RLW-10	5	5	5	5	4	4	5	4

Weights	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
	20,00%	15,00%	10,00%	15,00%	10,00%	10,00%	10,00%	10,00%

3. Weighted scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
PAK-RLW-01	1,00	0,75	0,30	0,60	0,40	0,40	0,50	0,30
PAK-RLW-02	1,00	0,75	0,30	0,60	0,40	0,40	0,50	0,30
PAK-RLW-05	1,00	0,75	0,30	0,75	0,40	0,40	0,50	0,30
PAK-RLW-06	1,00	0,75	0,50	0,75	0,40	0,40	0,50	0,30
PAK-RLW-07	1,00	0,75	0,50	0,75	0,40	0,40	0,50	0,30
PAK-RLW-08	1,00	0,75	0,30	0,60	0,40	0,40	0,50	0,30
PAK-RLW-10	1,00	0,75	0,50	0,75	0,40	0,40	0,50	0,40

Project ID	Project Total Scores	Evaluation Categories
PAK-RLW-01	3,95	*III*
PAK-RLW-02	3,95	*III*
PAK-RLW-05	4,10	*II*
PAK-RLW-06	4,30	*II*
PAK-RLW-07	4,30	*II*
PAK-RLW-08	3,95	*III*
PAK-RLW-10	4,30	*II*

TAJIKISTAN

1. Answers (based on country's input)

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
TJK-RLW-01	Y	A	B	B	B	B	A	C
TJK-RLW-02	Y	B	B	B	B	B	A	C
TJK-RLW-03	Y	B	A	B	B	B	A	C

2. Raw scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
TJK-RLW-01	5	5	4	4	4	4	5	3
TJK-RLW-02	5	4	4	4	4	4	5	3
TJK-RLW-03	5	4	5	4	4	4	5	3

Weights	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
	20,00%	15,00%	10,00%	15,00%	10,00%	10,00%	10,00%	10,00%

3. Weighted scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
TJK-RLW-01	1,00	0,75	0,40	0,60	0,40	0,40	0,50	0,30
TJK-RLW-02	1,00	0,60	0,40	0,60	0,40	0,40	0,50	0,30
TJK-RLW-03	1,00	0,60	0,50	0,60	0,40	0,40	0,50	0,30

Project ID	Project Total Scores	Evaluation Categories
TJK-RLW-01	4,05	II
TJK-RLW-02	3,90	III
TJK-RLW-03	4,00	II

TURKEY

Rail

1. Answers (based on country's input)

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
TUR-RLW-01	Y	A	A	A	A	A	A	A
TUR-RLW-02	Y	A	C	A	A	A	A	A
TUR-RLW-03	Y	A	C	B	A	A	A	A
TUR-RLW-04A	Y	A	B	A	B	A	A	A
TUR-RLW-04B	Y	A	B	A	B	A	A	A
TUR-RLW-05	Y	A	A	A	A	A	A	A
TUR-RLW-07A	Y	C	C	C	B	A	A	A
TUR-RLW-07B	Y	C	C	C	B	A	A	A
TUR-RLW-08A	Y	A	C	B	B	B	A	A
TUR-RLW-08B	Y	A	C	B	B	B	A	A
TUR-RLW-10	Y	A	A	B	A	A	A	A
TUR-RLW-11	Y	A	B	A	A	B	A	A
TUR-RLW-12	Y	B	B	B	C	A	A	A
TUR-RLW-14	Y	A	A	A	A	A	A	A

2. Raw scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
TUR-RLW-01	5	5	5	5	5	5	5	5
TUR-RLW-02	5	5	3	5	5	5	5	5
TUR-RLW-03	5	5	3	4	5	5	5	5
TUR-RLW-04A	5	5	4	5	4	5	5	5
TUR-RLW-04B	5	5	4	5	4	5	5	5
TUR-RLW-05	5	5	5	5	5	5	5	5
TUR-RLW-07A	5	3	3	3	4	5	5	5
TUR-RLW-07B	5	3	3	3	4	5	5	5
TUR-RLW-08A	5	5	3	4	4	4	5	5
TUR-RLW-08B	5	5	3	4	4	4	5	5
TUR-RLW-10	5	5	5	4	5	5	5	5
TUR-RLW-11	5	5	4	5	5	4	5	5
TUR-RLW-12	5	4	4	4	3	5	5	5
TUR-RLW-14	5	5	5	5	5	5	5	5

Weights	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
	20,00%	15,00%	10,00%	15,00%	10,00%	10,00%	10,00%	10,00%

3. Weighted scores

Project ID	Criteria							
	C1	C2	C3	C4	C5	C6	C7	C8
TUR-RLW-01	1,00	0,75	0,50	0,75	0,50	0,50	0,50	0,50
TUR-RLW-02	1,00	0,75	0,30	0,75	0,50	0,50	0,50	0,50
TUR-RLW-03	1,00	0,75	0,30	0,60	0,50	0,50	0,50	0,50
TUR-RLW-04A	1,00	0,75	0,40	0,75	0,40	0,50	0,50	0,50
TUR-RLW-04B	1,00	0,75	0,40	0,75	0,40	0,50	0,50	0,50
TUR-RLW-05	1,00	0,75	0,50	0,75	0,50	0,50	0,50	0,50
TUR-RLW-07A	1,00	0,45	0,30	0,45	0,40	0,50	0,50	0,50
TUR-RLW-07B	1,00	0,45	0,30	0,45	0,40	0,50	0,50	0,50
TUR-RLW-08A	1,00	0,75	0,30	0,60	0,40	0,40	0,50	0,50
TUR-RLW-08B	1,00	0,75	0,30	0,60	0,40	0,40	0,50	0,50
TUR-RLW-10	1,00	0,75	0,50	0,60	0,50	0,50	0,50	0,50
TUR-RLW-11	1,00	0,75	0,40	0,75	0,50	0,40	0,50	0,50
TUR-RLW-12	1,00	0,60	0,40	0,60	0,30	0,50	0,50	0,50
TUR-RLW-14	1,00	0,75	0,50	0,75	0,50	0,50	0,50	0,50

Project ID	Project Total Scores	Evaluation Categories
TUR-RLW-01	4,50	II
TUR-RLW-02	4,30	I
TUR-RLW-03	4,15	I
TUR-RLW-04A	4,30	II
TUR-RLW-04B	4,30	II
TUR-RLW-05	4,50	II
TUR-RLW-07A	3,60	III
TUR-RLW-07B	3,60	III
TUR-RLW-08A	3,95	III
TUR-RLW-08B	3,95	III
TUR-RLW-10	4,35	I
TUR-RLW-11	4,30	II
TUR-RLW-12	3,90	I
TUR-RLW-14	4,50	I

ANNEX V:COMPLETED TEMPLATES & OTHER INPUT

AFGHANISTAN

RAIL TRANSPORT INFRASTRUCTURE

From City	To city	Length (km)	Track gauge (mm)	Number of tracks (DT=double, ST=single)	Traction (E=electrified, NE=non-electrified)	Max. load per axle (tonnes)	average speed pass-trains	average speed cargo trains	Moved Cargo Tonnes/	trains per day (cargo/ Pass/ Mixted)	Annual Forecast Increase of cargo %	Forecast Annual Increase of passenger %	Is it a Missing links or bottle neck? (YES/NO)
HAIRATAN	**MAZAR- E-SHARIF**	**75**	**1520**	**1 ST**	**NE**	**25-30**	**120**	**100**	**15000**	**10**	**15**	**-**	**NO**
SARHAD ABAD	**TORGUNDI**	**2 (MAIN LINE) 32 LOOP(LINE)**	**1520**	**ST**	**NE**	**25**	**-**	**100**	**10000**	**8**	**10**	**-**	**NO**

Rail and related infrastructure Project Fiche

Project Name: FORTH PART OF KHAF – HERAT RAILWAY PROJECT
Project ID: -
ECO ROUTE NUMBER:
Project Description:
Islamic Republic of Iran funded third part of this project with length of 62 km.

Contact address/details:

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city
End point/node/city

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☐ NO☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☐ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$):
Expected Starting Date:
Expected Completion Date:
IRR:
Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design
☐ Planning ☐ Identification
Expected Funding Sources (and the % of funding for each one):
National Funds: …
Foreign aid:…
Bank loans: …
Grants: …
Private Funds (PPP basis). Please provide details……..…
Other….
Foreign cooperation sought? ☐ YES ☐ NO
If yes, please describe…….
Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..
Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
…….
Reasons for which project implementation has been delayed, (if applicable)…..
Any relevant Documentation?
Pre-feasibility study…….. ☐
Feasibility study…….. ☐
Technical Studies (Design etc)…… ☐
Other……
Other project-related information?.....

***If not available for 2010, please insert the latest year**

AZERBAIJAN

Rail and related infrastructure Project Fiche

Project Name: *The construction of the railway line of Astara-Iranian border across the North-South transport corridor*	
Nature of Project:	☑ New ☐ Rehabilitation ☐ Upgrade ☐ Other
Location:	*The construction of the railway line of Astara-Iranian border which is 8,3 km*
Status of Project:	☐ Identification ☑ Planning ☐ Study ☐ Design ☐ Tendering ☐ Under Construction
Project Objectives: *	*It will play an important role in the development of the direct railway relations with the countries of Europe, Asia, Near East, Scandinavia and Baltic region across the North-South transport corridor*
Project Description: *Now there are problems in the transportation via the Caspian Sea between Russia and Iran across the North-South transport corridor in winter. At the moment the existing railway line from Russia to the south region of Azerbaijan (Astara) is in operation. The railway line of Kazvin-Rasht-Astara (Iran) – Astara (Azerbaijan) which is being constructed in the territory of Iran will be connected with the railways of Russia via the territory of Azerbaijan.*	
I. Projected traffic (2015)**	
a) All traffic (trains/day)	
b) International traffic	
b1) passenger trains/day, passenger trains/year b2) freight/trains/day, tons/year b3) mixed trains/day	*4 trains/day 1420 trains/year* *11,3 trains/day 6 354 448 ton/year*
c) Domestic traffic	
c1) passenger trains/day, passenger trains/year c2) freight trains/day, tons/year c3) mixed trains/day	*2 trains/day 730 trains/year*
II. Travel costs per passenger/ton per km for the section considered (existing, and if project is implemented)* **	*10 ton/km – 19.753 cents (US)* *10 passenger/km – 53.086 cents* *(1 USD = 0.79 AZN)*
III. Technical Design characteristics for the existing situation	
a) Part of an international agreement (as AGC) b) Type of rail lines (electrified, non electrified, max. speed etc) c) No of tracks d) Length (in km) e) Type of special structures (length of tunnels, length of bridges, etc)	 *Electrified 328 km* *Not electrified 185 km* *100 km/h* *513* *4712 p.m. (bridges)*

The construction of the second railway line between the Osmanly-Astara section of the link of Baku – Osmanly – Astara (Iranian border)

Profitability – 60.5%
Required allocation ≈55 mln. USD

Baku – Astara (Iranian border).

Construction of the railway, road and pedestrian bridges across Astara river and a station consisting of 4 lines.

It won't be any long waiting time for the trains after the construction of the railway, road and pedestrian bridges across Astara river and a station consisting of 4 lines (each-1050 m) in order to supervise in carriages.

Project Name: *Reconstruction and rehabilitation of Baku – Boyuk-Kesik (Georgian border) railway of the project Baku-Tbilisi-Kars*	
Nature of Project:	☐ New ☑ Rehabilitation ☐ Upgrade ☐ Other
Location:	*Baku – Boyuk-Kesik (Georgian border)*
Status of Project:	☐ Identification ☐ Planning ☑ Study ☐ Design ☐ Tendering ☐ Under Construction
Project Objectives: *	*The increasing of the competitive ability of the international TRASECA transport corridor.*
Project Description: *The reconstruction and rehabilitation of this area which is the segment of Baku-Tbilisi-Kars railway line will play an important role in the connection of the Trans Europe and Trans Asia railway networks.*	
I. Current traffic**	
a) All traffic (trains/day)	
b) International traffic	
b1) passenger trains/day, passenger trains/year b2) freight/trains/day, tons/year b3) mixed trains/day	*2 trains / day 710 trains/year* *30,4 trains/day 15 290 986 ton/year*
c) Domestic traffic	
c1) passenger trains/day, passenger trains/year c2) freight trains/day, tons/year c3) mixed trains/day	*8 trains / day 2920 trains/year* *30,4 trains/day 15 290 986 ton/year*
II. Travel costs per passenger/ton per km for the section considered (existing, and if project is implemented)***	*10 ton/km – 19.753 cents (US)* *10 passenger/km – 53.086 cents* *(1 USD = 0.79 AZN)*
a) Part of an international agreement (as AGC) b) Type of rail lines (electrified, non electrified, max. speed etc) c) No of tracks d) Length (in km) e) Type of special structures (length of tunnels, length of bridges, etc)	 *Electrified 503 km* *100 km/h* *503* *3955 p.m. (bridges)*

Rail Transport Infrastructure

From City	To City	Length (km)	Track gauge (mm)	Number of tracks (DT= double, ST= single)	Traction (E= electrified, NE=non-electrified)	Max. load per axle (tonnes)	average speed pass-trains	average speed cargo trains	Moved Cargo Tonnes/	trains per day (cargo/ Pass/ Mixted)	Ar For Inc of
Baku – Boyuk-Kyasik	Georgia	503	1520	DT	E	57.4	50.6	30.6	3500	18/3	
Baku – Yalama	Russia	201	1520	DT	E	56.8	54.6	26.3	3200	12/2	
Baku – Astara	Iran	312	1520	DT-ST	E-NE	60.3	40.5	29.4	2500	5/2	
Baku – Sadarak	Turkey	603	1520	DT-ST	E	60.3	40.1	29.4	2500	4/1	

Note:

1. In the 3rd row Baku-Astara the railway connection is absent between Azerbaijan and Iran. Trains are running until Astara Station with further uploading to warehouses or uploading on trucks with destination towards Iran and other eastern countries.
2. In the 4th row Baku-Sadarak due to the occupied territory of Azerbaijan, trains are running until Goradiz Station. Data are provided for domestic transportation.

Besides, there is rail-ferry connection between Bau-Aktau (Kazakhstan) and Baku-Turkmenbashi (Turkmenistan).

IRAN

RAIL INFRASTRUCTURE PROJECTS

	From City	To city	Length (km)	Track gauge (mm)	Number of tracks (DT= double, ST= single)	Traction (E= electrified, NE=non-electrified)	Max. load per axle (tonnes)	average speed pass-trains	average speed cargo trains	Moved Cargo Tonnes/	trains per day (cargo/ Pass/ Mixed)	Annual Forecast Increase of cargo %	Forecast Annual Increase of passenger %	Is it a Missin links c bottlene (YES/N
North-South Corridor	Anzali	Rasht	205	1435 mm	ST	NE	25	-	-	-	-	-	-	YES
	Rasht	Qazvin	167	1435 mm	ST	NE	25	-	-	-	-	-	-	YES
	Qazvin	Tehran	144	1435 mm	DT=28	NE	25	88	50	2945000	-	-	-	No
	Tehran	Bafq	720	1435 mm	DT=144	NE	25	80	53	26945000	-	-	-	No
	Bafq	Bandar Abbas	613	1435 mm	DT=400	NE	25	80	47	31141000	-	-	-	No
Branch 1	Bafq	Zarand	157	1435 mm	ST	NE	20	70	50	222000	-	-	-	No
	Zarand	Kerman	79	1435 mm	ST	NE	20	70	50	187000	-	-	-	No
	Kerman	Bam	221	1435 mm	ST	NE	25	70	50	-	-	-	-	No
	Bam	Zahedan	315	1435 mm	ST	NE	20	70	50	-	-	-	-	No
	Zahedan	Mirjaveh	94	1435 mm	ST	NE	20	70	50	-	-	-	-	No
Branch 2	Qom	Arak	147	1435 mm	ST	NE	20	60	45	3600000	-	-	-	No
	Arak	Dorood	147	1435 mm	ST	NE	20	49	45	3435000	-	-	-	No
	Dorood	Andimeshk	208	1435 mm	ST	NE	20	47	41	3138000	-	-	-	No
	Andimeshk	Ahvaz	141	1435 mm	ST	NE	20	63	49	3269000	-	-	-	No
	Ahvaz	Bandar Emam	112	1435 mm	ST	NE	25	66	44	4274000	-	-	-	No
East-West Corridor	Sarakhs	Motahari	152	1435 mm	ST	NE	25	74	45	3666000	-	-	-	No
	Motahari	Neishabur	106	1435 mm	DT=100	NE	25	87	56	3625000	-	-	-	No
	Neishabur	Neghab	133	1435 mm	DT=133	NE	25	87	56	4228000	-	-	-	No
	Neghab	Shahrud	226	1435 mm	DT=226	NE	25	90	54	1375000	-	-	-	No
	Shahrud	Semnan	201	1435 mm	DT=201	NE	25	83	48	1789000	-	-	-	No
	Semnan	Aprin	235	1435 mm	DT=202	NE	25	86	52	6009000	-	-	-	No
	Aprin	Qazvin	140	1435 mm	DT=39	NE	20	88	50	2944000	-	-	-	No
	Qazvin	Zanjan	169	1435 mm	ST	NE	20	83	52	730000	-	-	-	No
	Zanjan	Mianeh	124	1435 mm	ST	NE	20	70	52	556000	-	-	-	No
	Mianeh	Maraghe	168	1435 mm	ST	NE	20	55	50	513000	-	-	-	No
	Maraghe	Tabriz	129	1435 mm	ST	NE	20	62	48	1126000	-	-	-	No
	Tabriz	Razi	221	1435 mm	ST	NE	20	68	53	1340000	-	-	-	No
	Mashhad	Fariman	38	1435 mm	DT=38	NE	25	87	56	720000	-	-	-	No
	Fariman	Kashmar	55	1435 mm	DT=55	NE	25	87	56	3145000	-	-	-	No
	Kashmar	Torbat Heidarieh	107	1435 mm	ST	NE	25	68	45	1900000	-	-	-	No
	Torbat Heidarieh	Tabas	331	1435 mm	ST	NE	25	81	49	1797000	-	-	-	No
	Tabas	Bafq	352	1435 mm	ST	NE	25	71	42	6542000	-	-	-	No

Rail transport infrastructure investment priority projects
RAI projects to be linked to the neighboring countries and to make operational the region corridors are:

Title	Remarks	
Tehran-Mashhad axis	926 km ((2000 km (inward/outward))) . 50% of the cost is needed for track construction and 50% for supplying fleet	Track electrificati
Bafq-Bandar Abba Axis	620 km ((1200 km (inward/outward)))	
Qazvin- Rasht-Anzali	205 km. Qazvin-Rasht route has 40% physical progress	Under Construction
Rasht-Astara	167 km	
Miyaneh-Tabriz	202 km	
Khaf-Herat	191 km (76 km inside Iran, 115 km outside Iran)	
Gorgan-Inchehbrun (along Kazakhstan, Turkmenistan-Iran Corridor)	82 km. The route study is complete and is going to be constructed soon.	
Khorramshahr-Chalamcheh-Basra	51 km (16 km in Iran which is completed and has become operational. The study of the line in Iraq is being finalized)	
Arak-Kermanshah-Khosravi	566 km (infrastructure operations from Arak to Kermanshah is under way)	

ECO ROUTE NUMBER:
RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))

(border with Turkey)-Razi-Tabriz-Miyaneh (new alignment)

RAIL ROUTE II - EXTENSIONS
ECO-RAIL 2E-A:

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: Tabriz-Miyaneh
Project ID:
Project Description: **The route starts from Miyaneh existing station (along Tehran-Tabriz railway), passes mainly through mountainous areas and reaches Tabriz existing station.**
Rationale and Objectives: **The main goal is to cut the existing route of Miyaneh-Tabriz by 100 km; this will reduce travel time of passenger trains from 7.5 hr to less than 3 hr and freight wagons to 5 hr.**
Expected impacts and benefits: **Since the route is located along East-West corridor, length and time reduction contributes to increase attraction of East-West international transit and Asian Railways (routes ended in Razai and Djolfa borders).**

Contact address/details: Construction and Development of Transport Infrastructure Company Ministry of Road and Urban Development . Website address: www.CDTIC.ir

Section 1. Project Technical Characteristics:

1. Location (latitude/longitude or alternatively a map):
2. Start point/node/city: **Tabriz**
3. End point/node/city: **Miyaneh**
4. AGC /AGTC Reference No. (if applicable):
5. Trans-Asian Railway (TAR): YES ■ NO □
6. Length (in km): **205 km**
7. Track gauge (mm): **1435 mm**
8. No of tracks (DT=double, ST=single): **DT**
9. Loading gauge (UIC):
10. Traction: Electrified □ Non-Electrified ■
11. Signaling type: Automatic ■ Manual □
12. Maximum allowed speed - passenger trains: **120 km**
13. Maximum allowed speed - freight trains: **100 km**

The new projects in red have been identified. Please include any additional ones.

14. Travel transit time pass/freight trains(hours): **3 hr for passenger trains and 5 hr for freight trains**

15. Maximum load per axle (tones): **20/25 tons**

16. Maximum capacity (trains/day):**7 up passenger trains and 12 up freight trains per day**

17. Average Daily Train Traffic - Passenger trains[1]:

18. Average Daily Train Traffic - Freight trains[1]:

19. Expected (passenger)traffic increase(in %- both existing and generated): **4 M in the 10th year of operation**

20. Expected (freight) traffic increase(in % - both existing and generated)**6 MT in the 10th year of operation**

21. Volume of cargo moved (tones and TEUs)[1]:

22. Current Bottleneck/Missing Links: **-**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **, IF YES, PLEASE PROCEED:**

23. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: Greatly improve connectivity, **B: Significantly improve connectivity**, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

24. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

25. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO □

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

26. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

27. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES ■ NO □

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent

(for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

28. Will the project potentially create negative environmental or social impacts (pollution, safety etc)? YES ■ NO ☐

If **yes,** the magnitude of impact is:

A: No impact, **B: Slight impact,** C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

29. Project cost (in million$): 370 Million Euros (based on 2011 price)

Out of which fixed investments:

30. Expected Starting Date: **2001**

31. Expected Completion Date: **2014**

32. IRR: Internal return investment will be 7.5 %

33. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

34. Expected Funding Sources (and the % of funding for each one):

a. ***Foreign aid:...**

b. Bank loans: ...

c. Grants: ...

d. Private Funds (PPP basis). Please provide details.....

e. Other: Involvement of private sector for superstructure and signaling is welcome

35. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe.....

36. Expenses made so far (2010), as a percentage of the project's total cost: So far 2619 Billion Rials are spent that is 30% of the project total cost

37. Percentage of budget of public works allocated: **30%**
38. GDP (year 2010 in million $): .....
39. Implementation arrangements: based on UIC standards and Iran's national rules
40. Critical success factors:.....
41. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
42. Reasons for which project implementation has been delayed, (if applicable).....
43. Any relevant Documentation?

Pre-feasibility study..... ☐
Feasibility study..... ■
Technical Studies (Design etc)..... ■
Other.....

44. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE V- Azerbaijan to Iran (Yalama - Bandar e Emam Khomeyni)

Missing link: Qazvin-Rasht-Anzali-Astara

1- Qazvin-Rasht-Anzali 2-Rasht - Astara

RAIL ROUTE V - BRANCHES

ECO RAIL 5B- 1: missing links [Railway gauge 1536mm] (Azerbaijan) Baki- ferry to Bandar e Anzali, railway line Bandar e Anzali-Oazvin

ECO RAIL 5B -2 : (border with Russia)- Border Kazakhstan- Atyrau-[Railway gauge 1536mm]-missing links Atyrau or Aktau ferry to Bandar e Anzali, railway line Bandar e Anzali-Oavzvin

ECO RAIL 5B-3 : (Turkmenistan) Turkmenbashi[Railway gauge 1536mm]--Ferry to Bandar e Anzali

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: Construction of two routes: **Qazvin-Rasht-Anzali and Rashat - Astara**

Project ID:

Project Description: **The project serves to connect Gilan Province, Anzali port and Astara Border to the country rail network**

Rationale and Objectives: **1) To facilitate exchanges between northern and southern ports of the country 2) to create a complete rail link through North-South Corridor i.e. rail direct link of Persian Gulf and Indian sub- continent with Russia, CIS , Caucasus and Europe 3) to pave the ground for development of commercial exchanges with Caspian sea countries, Batumi and Poti Ports in Black Sea and European countries**

Contact address/details: Construction and Development of Transport Infrastructure Company Ministry of Road and Urban Development . Website address: www.CDTIC.ir

Section 1. Project Technical Characteristics:

45. Location (latitude/longitude or alternatively a map):

46. Start point/node/city: **Qazvin**

47. End point/node/city: **Anzali Port and Astara Border (between Iran and Azerbaijan)**

48. AGC /AGTC Reference No. (if applicable):

49. Trans-Asian Railway (TAR): YES ■ NO □

50. Length (in km): **205 km +167 km**

51. Track gauge (mm): **1435 mm**

52. No of tracks (DT=double, ST=single): **ST (40 km will be DT)**

53. Loading gauge (UIC):

54. Traction: Electrified □ Non-Electrified ■

55. Signaling type: Automatic ■ Manual □

56. Maximum allowed speed - passenger trains: **160 km**

57. Maximum allowed speed - freight trains: **120 km**

58. Travel transit time pass/ freight trains(hours): **4 hr to Anzali Port and 6 hr to Astara Border**

59. Maximum load per axle (tones):

60. Maximum capacity (trains/day): **14 up-freight trains for Qazvin-Rasht-Anzali and 17-up freight trains for Rasht-Astara**

61. Average Daily Train Traffic - Passenger trains[1]:

62. Average Daily Train Traffic - Freight trains[1]:

63. Expected (passenger) traffic increase (in % - both existing and generated): **About 2 Million in the 10th Year of operation**

64. Expected (freight) traffic increase (in % - both existing and generated): **5.5 M for Qazvin-Rasht-Anzali section and 2.4 M for Rasht-Astara in the 10th Year of operation**

65. Volume of cargo moved (tones and TEUs)[1]:

66. Current Bottleneck/Missing Links: **Along Qazvin- Rasht section (Kuhin to Loshan part) 40 km is designed as double track with 30% gradient due to the hard topography of the region**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **IF YES, PLEASE PROCEED:**

67. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: **Greatly improve connectivity**, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

68. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

69. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ No □

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

70. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

71. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES ■ NO □

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

72. Will the project potentially create negative environmental or social impacts (pollution, safety etc)? YES ☐ NO ■

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

73. Project cost (in million$): Qazvin-Rasht project: costs required to complete the project: 250 M Euros, Rasht-Astara: 195 M Euros (based on 2011 prices)

Out of which fixed investments:

74. Expected Starting Date: **2002 for Qazvin-Rasht-Anzali and 2010 for Rasht-Astara**

75. Expected Completion Date: **2014 operation of Qazvin-Rasht-Anzali and 2015 Rasht-Astara**

76. IRR:

77. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

78. Expected Funding Sources (and the % of funding for each one):

a. ***National Funds:** ...

b. Foreign aid:...

c. Bank loans: ...

d. Grants: ...

e. **Private Funds (PPP basis).** Please provide details **as B.O.T**

f. Other: Private sector investment is acceptable

79. Foreign cooperation sought? YES ■ NO ☐

If yes, please describe: **to construct Rash- Astara (Iran)-Astara (Azerbaijan) a consortium is being established among Iran, Azerbaijan and Russia**

Expenses made so far (2010), as a percentage of the project's total cost: So far 221 360 000 USD are spent which includes 27% of the required capital.

80. Percentage of budget of public works allocated: 100%
81. GDP (year 2010 in million $): .....
82. Implementation arrangements.....
83. Critical success factors:.....
84. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
85. Reasons for which project implementation has been delayed, **lack of sufficient budget**
86. Any relevant Documentation?

Pre-feasibility study..... ☐

Feasibility study..... ■

Technical Studies (Design etc)..... ■

Other.....

87. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE VI- Kazakhstan via Turkmenistan to Iran (Tobol to Bandar e Abbas)

Missing link: Border with Turkmenistan- [railway gauge 1520mm]-Gorgan-Gonbad-Inchebrun

RAIL ROUTE VI - BRANCHES

ECO-RAIL 6B-C: Iran section : Amir Abad-Romstakola

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: Gorgan- Inchehbrun

Project ID:

Project Description: **The route starts in Iran and continues to Turkmenistan and ended in Khazakhstan**

Rationale and Objectives: **to connect CIS countries to the Persian Gulf states and South Asian countries**

Expected impacts and benefits: **1)increasing economic and commercial exchanges with Persian Gulf and CIS countries , 2)connection of far East countries (China) to Iran and Persian Gulf , 3)significant reduction of transport distances within region and from far East to Europe 4)connection of CIS to Persian Gulf via Iran and East and south east Asian countries**

Contact address/details:

Section 1. Project Technical Characteristics:

88. Location (latitude/longitude or alternatively a map):

89. Start point/node/city: **Gorgan**

90. End point/node/city: **Inchehbrun**

91. AGC /AGTC Reference No. (if applicable):

92. Trans-Asian Railway (TAR): YES ☐ NO ■

93. Length (in km): **82 km**

94. Track gauge (mm): **1435 mm**

95. No of tracks (DT=double, ST=single): **ST**

96. Loading gauge (UIC):

97. Traction: Electrified ☐ Non-Electrified ■

98. Signaling type: Automatic ■ Manual ☐

99. Maximum allowed speed - passenger trains: **160 km**

100. Maximum allowed speed - freight trains: **120 km**

101. Travel transit time pass/ freight trains(hours):

102. Maximum load per axle (tones):

103. Maximum capacity (trains/day):

104. Average Daily Train Traffic - Passenger trains[1]:

105. Average Daily Train Traffic - Freight trains[1]:

106. Expected (passenger) traffic increase (in % - both existing and generated):

107. Expected (freight) traffic increase (in % - both existing and generated)

108. Volume of cargo moved (tones and TEUs)[1]:

109. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **, IF YES, PLEASE PROCEED:**

110. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

111. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

112. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO □

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

113. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

114. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES ■ NO □

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

115. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES □ NO ■

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

116. Project cost (in million$):

Out of which fixed investments:

117. Expected Starting Date: **2009**

118. Expected Completion Date: **2012**

119. IRR:

120. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

121. Expected Funding Sources (and the % of funding for each one):

a. *National Funds: ...

b. Foreign aid:...

c. Bank loans: ...

d. Grants: ...

e. Private Funds (PPP basis). Please provide details.....

f. Other....

122. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe.....

123. Expenses made so far (2010), as a percentage of the project's total cost: .....

124. Percentage of budget of public works allocated: .....
125. GDP (year 2010 in million $): .....
126. Implementation arrangements.....
127. Critical success factors:.....
128. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
129. Reasons for which project implementation has been delayed, (if applicable).....
130. Any relevant Documentation?

Pre-feasibility study..... ☐

Feasibility study..... ■

Technical Studies (Design etc)..... ■

Other.....

131. Other formation?.....

[1] *For the year 2010 and latest year, if available.*

ECO ROUTE NUMBER: RAIL ROUTE VI- Emam Port-Khorramshahr

Missing link: building a direct link between Emam Khomeini Port-Khorramshahr

RAIL ROUTE VI - BRANCHES

ECO-RAIL 6B-C:

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: Emam Khomeini Port-Khorramshar

Project ID:

Project Description: **At present a rail link is available between Emam Khomeini Port -Ahvaz-and Khorramshahr Port with the length of 232 km. The new line shall cut the route length by 118 km and significantly improves freight and passenger traffic.**

Rationale and Objectives: **1) Reducing the existing rail link by 118 km 2) upgrading rail transit route of Emam Khomeini Port-Basra 3) covering freight /passenger main centers and meeting the transport demands**

Expected impacts and benefits: **a considerable saving in fuel and travel time will be achieved and safety will be increased.**

Contact address/details:

Section 1. Project Technical Characteristics:

132. Location (latitude/longitude or alternatively a map):

133. Start point/node/city: **Emam Khomeini Port**

134. End point/node/city: **Khorramshahr**

135. AGC /AGTC Reference No. (if applicable):

136. Trans-Asian Railway (TAR): YES ■ NO □

137. Length (in km): **114 km**

138. Track gauge (mm): **1435 mm**

139. No of tracks (DT=double, ST=single): **ST**

140. Loading gauge (UIC):

141. Traction: Electrified □ Non-Electrified ■

142. Signaling type: Automatic ■ Manual □

143. Maximum allowed speed - passenger trains: **160 km**

144. Maximum allowed speed - freight trains: **120 km**

145. Travel transit time pass/ freight trains(hours):

146. Maximum load per axle (tones):

147. Maximum capacity (trains/day):

148. Average Daily Train Traffic - Passenger trains[1]:

149. Average Daily Train Traffic - Freight trains[1]:

150. Expected (passenger) traffic increase (in % - both existing and generated): **more than 3 M**

151. Expected (freight) traffic increase (in % - both existing and generated): **7 M**

152. Volume of cargo moved (tones and TEUs)[1]:

153. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** , **IF YES, PLEASE PROCEED:**

154. Is the project serving international connectivity? YES ■ NO ☐

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

155. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO ☐

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

156. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO ☐

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

157. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO ☐

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

158. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES ■ NO ☐

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

159. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES ■ NO ☐

If **yes,** the magnitude of impact is:

A: No impact, **B: Slight impact**, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

160. Project cost (in million$):

Out of which fixed investments:

161. Expected Starting Date:

162. Expected Completion Date:

163. IRR:

164. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

165. Expected Funding Sources (and the % of funding for each one):

a. National Funds: ...

b. Foreign aid:...

c. Bank loans: ...

d. Grants: ...

e. Private Funds (PPP basis). Please provide details.....

f. Other....

166. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe.....

167. Expenses made so far (2010), as a percentage of the project's total cost: .....

168. Percentage of budget of public works allocated: .....

169. GDP (year 2010 in million $): .....

170. Implementation arrangements.....

171. Critical success factors:.....

172. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....

173. Reasons for which project implementation has been delayed, (if applicable).....

174. Any relevant Documentation?

Pre-feasibility study..... ■

Feasibility study..... ■

Technical Studies (Design etc)..... ■

Other.....

175. Other project-related information?.....

[1] *For the year 2010 and latest year, if available.*

ECO ROUTE NUMBER: RAIL ROUTE VII- Kazakhstan via Uzbekistan, Turkmenistan to Iran (Almaty to Bandar Abbas)

Border with Turkmenistan-Sarakhs-Fariman-Torbat e Heydariyeh-Bafq-Badar e Abbas (upgrade line Bafq-Bandar e Abbas)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: **Electrification of Bafq-Bandar Abbas**
Project ID:
Project Description:
Rationale and Objectives: to upgrade the axis, increase travel speed, increase transport volume
Contact address/details: Railways of Iran, Electrification Dept. tel: 00 98 21 55 12 81 10

Section 1. Project Technical Characteristics:

176. Location (latitude/longitude or alternatively a map):
177. Start point/node/city: **Bafq**
178. End point/node/city: **Bandar Abbas Station**
179. AGC /AGTC Reference No. (if applicable):
180. Trans-Asian Railway (TAR): YES ■ NO □
181. Length (in km): **620 km**
182. Track gauge (mm): **1435 mm**
183. No of tracks (DT=double, ST=single): **DT**
184. Loading gauge (UIC):
185. Traction: Electrified ■ Non-Electrified □
186. Signaling type: Automatic ■ Manual □
187. Maximum allowed speed - passenger trains: 160 km/hr
188. Maximum allowed speed - freight trains: 120 km/hr
189. Travel transit time pass/ freight trains(hours): 3 days
190. Maximum load per axle (tones): **25 tons**
191. Maximum capacity (trains/day): 40 /day
192. Average Daily Train Traffic - Passenger trains[1]: 10 /day
193. Average Daily Train Traffic - Freight trains[1]: 30 trains
194. Expected (passenger) traffic increase (in % - both existing and generated): 4725
195. Expected (freight) traffic increase (in % - both existing and generated): 21.690
196. Volume of cargo moved (tones and TEUs)[1]:
197. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □, **IF YES, PLEASE PROCEED:**

198. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: **Greatly improve connectivity,** B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

199. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES □ NO ■

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

200. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? ■ES □O

If **yes** the project is providing connection:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

201. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: **Greatly**, B: Significantly, C: Somewhat, D: Slightly, E: Does not

202. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES □ NO ■

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2016)**, C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

203. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES □ NO ■

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

204. Project cost (in million$): 560 Millions USD

Out of which fixed investments:

205. Expected Starting Date: 2012

206. Expected Completion Date: 2016

207. IRR: 19%

208. Project's stage: Construction ☐ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

Quality evaluation is under process (B.O.T)

209. Expected Funding Sources (and the % of funding for each one):

a. National Funds: ...

b. **Foreign aid: 100%**

c. Bank loans: ...

d. Grants: ...

e. Private Funds (PPP basis). Please provide details.....

f. Other....

210. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe.....

211. Expenses made so far (2010), as a percentage of the project's total cost: **5%**

212. Percentage of budget of public works allocated: .....
213. GDP (year 2010 in million $): .....
214. Implementation arrangements.....
215. Critical success factors:.....
216. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
217. Reasons for which project implementation has been delayed, (if applicable).....
218. Any relevant Documentation?

Pre-feasibility study..... ☐

Feasibility study..... ☐

Technical Studies (Design etc)..... ☐

Other.....

219. Other project-related information?.....

[1] *For the year 2010 and latest year, if available*

ECO ROUTE NUMBER: RAIL ROUTE VII-

Border with Turkmenistan-Sarakhs-Mashhad-Tehran (upgrade line Tehran-Mashhad)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: Electrification of Tehran-Mashhad
Project ID:
Project Description:
Rationale and Objectives: to upgrade the axis, increase travel speed, increase transport volume
Expected impacts and benefits: to upgrade the axis, increase travel speed, increase transport volume
Contact address/details: Railways of Iran, Electrification Dept. tel: 00 98 21 55 12 81 10

Section 1. Project Technical Characteristics:

220. Location (latitude/longitude or alternatively a map):
221. Start point/node/city: **Tehran**
222. End point/node/city: **Mashhad Station**
223. AGC /AGTC Reference No. (if applicable):
224. Trans-Asian Railway (TAR): YES ■ NO □
225. Length (in km):**926 km**
226. Track gauge (mm):**1435 mm**
227. No of tracks (DT=double, ST=single): **DT**
228. Loading gauge (UIC):
229. Traction: Electrified ■ Non-Electrified □
230. Signaling type: Automatic ■ Manual □
231. Maximum allowed speed - passenger trains:200 km/hr
232. Maximum allowed speed - freight trains: 140 km/hr
233. Travel transit time pass/ freight trains(hours):
234. Maximum load per axle (tones): **20 tons**
235. Maximum capacity (trains/day): 80 /day
236. Average Daily Train Traffic - Passenger trains[1]: 60 /day
237. Average Daily Train Traffic - Freight trains[1]: 20 trains
238. Expected (passenger) traffic increase (in % - both existing and generated): 20067
239. Expected (freight) traffic increase (in % - both existing and generated): 5.930
240. Volume of cargo moved (tones and TEUs)[1]:

241. Current Bottleneck/Missing Links: Financing

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □, **IF YES, PLEASE PROCEED:**

242. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: **Greatly improve connectivity,** B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

243. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES □ NO ■

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

244. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? ■ES □O

If **yes** the project is providing connection:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

245. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: **Greatly**, B: Significantly, C: Somewhat, D: Slightly, E: Does not

246. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES □ NO ■

If **yes** the project is included in the national plan and:

A: **requires immediate realization (for implementation up to 2013),** B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

247. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES □ NO ■

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

248. Project cost (in million$): 1 200 Millions USD

Out of which fixed investments:

249. Expected Starting Date: 2012

250. Expected Completion Date: 2014

251. IRR: 15%

252. Project's stage: Construction ☐ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

The project is being carried as EPCF

Expected Funding Sources (and the % of funding for each one):

a. **National Funds: 15%**

b. **Foreign aid: 85%**

c. Bank loans: ...

d. Grants: ...

e. Private Funds (PPP basis). Please provide details.....

f. Other....

253. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe.....

254. Expenses made so far (2010), as a percentage of the project's total cost: 2%

255. Percentage of budget of public works allocated: .....
256. GDP (year 2010 in million $): .....
257. Implementation arrangements.....
258. Critical success factors:.....
259. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
260. Reasons for which project implementation has been delayed, (if applicable).....
261. Any relevant Documentation?

Pre-feasibility study..... ■

Feasibility study..... ☐

Technical Studies (Design etc)..... ☐

Other.....

262. Other project-related information?.....

[1] *For the year 2010 and latest year, if available*

ECO ROUTE NUMBER: RAIL ROUTE VII- Neyshabur-Torbat e Heidarieh. Ma'dan e Sangan- border with Afqanistan- Heart (Afqanistan)

Missing link Ma'dan e Sagan- border with Afghanistan- Herat (Afghanistan) (planned for construction)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: Khaf-Herat
Project ID:
Project Description: **The route will starts from Torbat e Heidarieh , stretches towards Ma'dan Sangan (Khaf) and ended in Herat**
Rationale and Objectives: **1) to improve transport between IRAN and Afqanistan 2) to attract transit cargoes between Afqanistan and international seas and Europe 3) to establish a uniform track gauge between Iran and Afqanistan future railway**
Contact address/details: **Construction and Development of Transport Infrastructure Company Ministry of Road and Urban Development . Website address: www.CDTIC.ir**

Section 1. Project Technical Characteristics:

263. Location (latitude/longitude or alternatively a map):
264. Start point/node/city: **Khaf**
265. End point/node/city: **Herat**
266. AGC /AGTC Reference No. (if applicable):
267. Trans-Asian Railway (TAR): YES ■ NO ☐
268. Length (in km): **191 km (76 km in Iran territory and 115 km in Afqanistan)**
269. Track gauge (mm): **1435 mm**
270. No of tracks (DT=double, ST=single): **ST**
271. Loading gauge (UIC):
272. Traction: Electrified ☐ Non-Electrified ■
273. Signaling type: Automatic ■ Manual ☐
274. Maximum allowed speed - passenger trains: **160 km**
275. Maximum allowed speed - freight trains: **120 km**
276. Travel transit time pass/ freight trains(hours):
277. Maximum load per axle (tones): **25 tons**
278. Maximum capacity (trains/day): **15 up freight trains per day**
279. Average Daily Train Traffic - Passenger trains[1]:
280. Average Daily Train Traffic - Freight trains[1]:
281. Expected (passenger) traffic increase (in % - both existing and generated): **500 000 at**

the 10th year of operation

282. Expected (freight) traffic increase (in % - both existing and generated): **5 M at the end of 10th year of operation**

283. Volume of cargo moved (tones and TEUs)[1]:

284. Current Bottleneck/Missing Links: -

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **, IF YES, PLEASE PROCEED:**

285. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, **C: Somewhat improve connectivity,** D: Slightly improve connectivity, E: Does not improve connectivity.

286. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

287. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO □

If **yes** the project is providing connection:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

288. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

289. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES □ NO ■

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

290. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES ■ NO □

If **yes,** the magnitude of impact is:

A: **No impact**, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

291. Project cost (in million$): Costs required to complete 76 km within Iran territory is around 141 280 000USD (based on 2011 price)

Out of which fixed investments:

292. Expected Starting Date: **2005**

293. Expected Completion Date: **2012**

294. IRR:

295. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

296. Expected Funding Sources (and the % of funding for each one):

a. **National Funds:** ...
b. Foreign aid:...
c. Bank loans: ...
d. Grants: ...
e. Private Funds (PPP basis). Please provide details.....
f. Other....

297. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe.....

298. Expenses made so far (2010), as a percentage of the project's total cost: 140 400 000 USD, that is 50% of the costs required

299. Percentage of budget of public works allocated: **50%**
300. GDP (year 2010 in million $): .....
301. Implementation arrangements.....
302. Critical success factors:.....
303. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
304. Reasons for which project implementation has been delayed, (if applicable).....
305. Any relevant Documentation?

Pre-feasibility study..... ☐
Feasibility study..... ■
Technical Studies (Design etc)..... ■
Other.....

306. Other project-related information?.....

[1] *For the year 2010 and latest year, if available.*

ECO ROUTE NUMBER: RAIL ROUTE VII-

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)°

Project Name: **Arak-Kermanshah-Khosravi**
Project ID:
Project Description:
Rationale and Objectives: **1)To connect the rail network of Iran to Iraq and Syria 2) To link South east Asian railways, CIS and Caucasus to Middle East railways and Lazeqieh Port in Mediterranean Sea**
Contact address/details: Construction and Development of Transport Infrastructure Company, Ministry of Road and Urban Development . Website address: www.CDTIC.ir

Section 1. Project Technical Characteristics:

307. Location (latitude/longitude or alternatively a map):

308. Start point/node/city: **Samangan station near Arak**

309. End point/node/city: **Khosravi (border of Iran and Iraq)**

310. AGC /AGTC Reference No. (if applicable):

311. Trans-Asian Railway (TAR): YES ■ NO □

312. Length (in km): **566 km**

313. Track gauge (mm):**1435 mm**

314. No of tracks (DT=double, ST=single): **ST**

315. Loading gauge (UIC):

316. Traction: Electrified □ Non-Electrified ■

317. Signaling type: Automatic ■ Manual □

318. Maximum allowed speed - passenger trains: **120 km**

319. Maximum allowed speed - freight trains: **100 km**

320. Travel transit time pass/ freight trains(hours):

321. Maximum load per axle (tones): **25 tons**

322. Maximum capacity (trains/day): 16 freight trains (i.e. 13 million tons of cargoes)

323. Average Daily Train Traffic - Passenger trains[1]:

324. Average Daily Train Traffic - Freight trains[1]:

325. Expected (passenger) traffic increase (in % - both existing and generated): 2.3 M (Samangan-Kermanshah) and 2 M (Kermanshah-Khosravi) in the 10th year of operation

326. Expected (freight) traffic increase (in % - both existing and generated): 2.7 M in the 10th year of operation

327. Volume of cargo moved (tones and TEUs)[1]:

328. Current Bottleneck/Missing Links: The route continuation in Iraqi territory needs reconstruction and renewal

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **, IF YES, PLEASE PROCEED:**

329. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: **Greatly improve connectivity,** B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

330. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

331. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO □

If **yes** the project is providing connection:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

332. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: **Greatly,** B: Significantly, C: Somewhat, D: Slightly, E: Does not

333. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES □ NO ■

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2016)**, C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

334. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES □ NO ■

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

335. Project cost (in million$):

Out of which fixed investments:

336. Expected Starting Date: Arak Kermanshah section : **2001 and Kermanshah-Khosravi: 2012**

337. Expected Completion Date: **Arak-Kermanshah section: 2013 , Kermanshah-Khosravi: 2016**

338. IRR:

339. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

340. Expected Funding Sources (and the % of funding for each one):

a. **National Funds: ...**
b. Foreign aid:...
c. Bank loans: ...
d. Grants: ...
e. Private Funds (PPP basis). Please provide details.....
f. Other: Private sector investment is welcome

341. Foreign cooperation sought? YES ☐ NO ☐

If yes, please describe.....

342. Expenses made so far (2010), as a percentage of the project's total cost: So far 200 Millions USD is spent that is 30% of the total project cost.

343. Percentage of budget of public works allocated: **30%**
344. GDP (year 2010 in million $): .....
345. Implementation arrangements.....
346. Critical success factors:.....
347. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
348. Reasons for which project implementation has been delayed, (if applicable).....
349. Any relevant Documentation?

Pre-feasibility study..... ☐
Feasibility study..... ■
Technical Studies (Design etc)..... ■
Other.....

350. Other project-related information?.....

[1] *For the year 2010 and latest year, if available.*

ECO ROUTE NUMBER: RAIL ROUTE VII- Khorramshahr-Shalamcheh-Basra (border with Iraq)

Missing link: Shalamcheh-Basra

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[a]

Project Name: **Khorramshahr-Shalamcheh-Basra**
Project ID:
Project Description:
Rationale and Objectives: **1)To facilitate trade exchanges between two countries 2) To make a rail link with Al Ladhiqiyeh Port (Syria) in Mediterranean Sea 3)possibility of export-import cargo transit of Iraq via Emam Khomeini Port 4)possibility of transit from/to CIS and Caucasus to Iraq 4) providing passenger services to Iraqi pilgrims 5) expanding rail connection to Kuwait, Saudi Arabia and other Persian Gulf countries**
Contact address/details: Construction and Development of Transport Infrastructure Company, Ministry of Road and Urban Development . Website address: www.CDTIC.ir

Section 1. Project Technical Characteristics:

351. Location (latitude/longitude or alternatively a map):

352. Start point/node/city: **Khorramshahr**

353. End point/node/city: **Basra**

354. AGC /AGTC Reference No. (if applicable):

355. Trans-Asian Railway (TAR): YES ■ NO □

356. Length (in km): **51 km (Khorramshahr-Shalamcheh 16 km in length already completed and being operated), Shalamcheh-Basra (35 km)**

357. Track gauge mm):**1435 mm**

358. No of tracks (DT=double, ST=single): **ST**

359. Loading gauge (UIC):

360. Traction: Electrified □ Non-Electrified ■

361. Signaling type: Automatic ■ Manual □

362. Maximum allowed speed - passenger trains: **160 km**

363. Maximum allowed speed - freight trains: **120 km**

364. Travel transit time pass/ freight trains(hours):

365. Maximum load per axle (tones):

366. Maximum capacity (trains/day): 21 up trains (one passenger train and 20 freight trains)

367. Average Daily Train Traffic - Passenger trains[1]:

368. Average Daily Train Traffic - Freight trains[1]:

369. Expected (passenger) traffic increase (in % - both existing and generated): about 36 000 in 2016, in case the section in Iraq to be completed in 2015

370. Expected (freight) traffic increase (in % - both existing and generated): about 6 Millions in 2016 , in case the section in Iraq to be completed in 2015

371. Volume of cargo moved (tones and TEUs)[1]:

Current Bottleneck/Missing Links: The rest of the route shall be studied and designed by Iraqi part from Shalamcheh to Basra.

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **, IF YES, PLEASE PROCEED:**

372. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: **Somewhat improve connectivity,** D: Slightly improve connectivity, E: Does not improve connectivity.

373. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: Greatly, B: Significantly, **C: Somewhat**, D: Slightly, E: Does not

374. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO □

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, **D: Slightly**, E: Does not

375. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

376. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES □ NO ■

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2016)**, C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

377. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES ■ NO □

If **yes,** the magnitude of impact is:

A: No impact, **B: Slight impact**, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

378. Project cost (in million$):

Out of which fixed investments:

379. Expected Starting Date: **2006**

380. Expected Completion Date: **2011 (the section in Iran has been completed and operated)**

381. IRR:

382. Project's stage: Construction ☐ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

383. Expected Funding Sources (and the % of funding for each one):

a. **National Funds:** ...
b. Foreign aid:...
c. Bank loans: ...
d. Grants: ...
e. Private Funds (PPP basis). Please provide details.....
f. Other....

384. Foreign cooperation sought? YES ☐ NO ■

If yes, please describe : **It is needed that Iraqi railway to facilitate construction of the line in its territory**

385. Expenses made so far (2010), as a percentage of the project's total cost: **100%**

386. Percentage of budget of public works allocated: .....
387. GDP (year 2010 in million $): .....
388. Implementation arrangements: UIC standards and Iran's domestic rules are applied
389. Critical success factors:.....
390. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
391. Reasons for which project implementation has been delayed, (if applicable).....
392. Any relevant Documentation?

Pre-feasibility study..... ☐
Feasibility study..... ■
Technical Studies (Design etc)..... ■
Other.....

393. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE VII- Khorramshahr-Shalamcheh-Basra (border with Iraq)

Missing link: Chabahar-Kalshur-

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE& ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[2]

Project Name: Chabahar-Zahedan-Mashhad

Project ID:

Project Description: the route starts from Chabahar, passing through 8 cities on the way and reaches Kerman-Zahedan railway in a region called Dumak; it continues its way through cities in South Khorrassan and enters Birjand. Passing through cities of Ghaen and Gonabad it enters Kalshur station and connects to Bafq-Mashhad axis, from there up to Sarakhs the railway is available.

Rationale and Objectives:1)creating a direct rail link among three provinces in Iran (Sistan&Baluchestan, South Khorrassan and Khorrassan) 2)Constructing a short transit route from Zahedan to Mashhad serving to connect CIS land-lock countries to the international waters (through Afqanistan and Turkmenistan)3)Covering freight centers in the eastern part of the country

Contact address/details: Construction and Development of Transport Infrastructure Company, Ministry of Road and Urban Development . Website address: www.CDTIC.ir

Section 1. Project Technical Characteristics:

394. Location (latitude/longitude or alternatively a map):

395. Start point/node/city: **Chabahar**

396. End point/node/city: **Mashhad towards Sarakhs (border with Turkmenistan)**

397. AGC /AGTC Reference No. (if applicable):

398. Trans-Asian Railway (TAR): YES ■ NO □

399. Length (in km): **1330 km (1730 km up to Sarakhs)**

400. Track gauge mm):**1435 mm**

401. No of tracks (DT=double, ST=single): **ST**

402. Loading gauge (UIC):

403. Traction: Electrified □ Non-Electrified ■

404. Signaling type: Automatic ■ Manual □

405. Maximum allowed speed - passenger trains: **160 km**

406. Maximum allowed speed - freight trains: **120 km**

407. Travel transit time pass/ freight trains(hours):

408. Maximum load per axle (tones):

409. Maximum capacity (trains/day):

410. Average Daily Train Traffic - Passenger trains[1]:

411. Average Daily Train Traffic - Freight trains[1]:

412. Expected (passenger) traffic increase (in % - both existing and generated): 1 175 000 passengers for first year of operation in 2014

413. Expected (freight) traffic increase (in % - both existing and generated): about 3.5 Millions

in 2014 , i.e. first year of operation (both domestic and transit traffic)

414. Volume of cargo moved (tones and TEUs)[1]:

Current Bottleneck/Missing Links: Chabahar- Kalshur

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES ■ **NO** □ **, IF YES, PLEASE PROCEED:**

415. Is the project serving international connectivity? YES ■ NO □

If **yes** is it expected to:

A: Greatly improve connectivity, **B: Significantly improve connectivity**, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

416. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES ■ NO □

If **yes** the project is providing solution:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

417. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES ■ NO □

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

418. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES ■ NO □

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

419. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES ■ NO □

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2014)**, C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

420. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? YES ■ NO □

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

421. Project cost (in million$):

Out of which fixed investments:

422. Expected Starting Date: **2010**

423. Expected Completion Date: **2014**

424. IRR:

425. Project's stage: Construction ■ Tendering ☐ Study/Design ☐
Planning ☐ Identification ☐

426. Expected Funding Sources (and the % of funding for each one):

a. National Funds: ...
b. Foreign aid:...
c. Bank loans: ...
d. Grants: ...
e. Private Funds (PPP basis). Please provide details
f. Other: **to absorb investment with the model of BOT or EPCF; or finance**

427. Foreign cooperation sought? YES ■ NO ☐

If yes, please describe : Expenses made so far (2010), as a percentage of the project's total cost:

428. Percentage of budget of public works allocated: .....
429. GDP (year 2010 in million $): .....
430. Implementation arrangements: UIC standards and Iran's domestic rules are applied
431. Critical success factors:.....
432. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....
.....
433. Reasons for which project implementation has been delayed, (if applicable).....
434. Any relevant Documentation?

Pre-feasibility study..... ☐
Feasibility study..... ■
Technical Studies (Design etc)..... ■
Other.....

435. Other project-related information?.....

KAZAKHSTAN

Rail and related infrastructure Project Fiche

Project Name: Electrification section of the Makat-Kandyagash
Project ID:
ECO ROUTE NUMBER: IV, VI
Project Description: Electrification section of the Makat-Kandyagash (392 km). Increasing transport capacity of railway station Makat-Kandyagash, cost of transportation and the volume of harmful emissions into the atmosphere

Contact address/details: Strategic plan of the Ministry of transport and communications of the Republic of Kazakhstan in the 2010-2014 years

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Makat**
End point/node/city **Kandyagash**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **240.0**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☒ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). **100 %** Please provide details **no information**

Other….

Foreign cooperation sought? ☐ YES ☒ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….

…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?.....

Project Name: Electrification section of the Dostyk - Aktogai
Project ID:
ECO ROUTE NUMBER: II, III, VI (6E-A)
Project Description: Electrification section of the Dostyk - Aktogai (309 km). Increased bandwidth railway station Dostyk-Aktogai, cost of transportation and the volume of harmful emissions into the atmosphere

Contact address/details: Strategic plan of the Ministry of transport and communications of the Republic of Kazakhstan in the 2010-2014 years

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Dostyk**
End point/node/city **Aktogai**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **546.0**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☐ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….

…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?.....

Project Name: Electrification section of the Almaty - Aktogai
Project ID:
ECO ROUTE NUMBER: II, III, VI (6E-A)
Project Description: Electrification section of the Almaty - Aktogai (541.4 km). Increased bandwidth railway station Almaty-Aktogai, cost of transportation and the volume of harmful emissions into the atmosphere

Contact address/details: Strategic plan of the Ministry of transport and communications of the Republic of Kazakhstan in the 2010-2014 years

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Almaty**
End point/node/city **Aktogai**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **1054.4**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☐ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….

…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?.....

Project Name: Enhanced line Atyrau-Beineu
Project ID:
ECO ROUTE NUMBER: IV, VI
Project Description: Increasing transport capacity of railway lines. Enhanced line Atyrau-Beineu by strengthening individual sections: Atyrau-Makat (21.1 km), Makat-Kulsary and Kulsary-Beineu 77.8 km

Contact address/details:

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Atyrau**
End point/node/city **Beineu**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **no information**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design
☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☐ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….
…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?

The project will increase the transport capacity of railway lines in Western Kazakhstan, characterized by a high intensity of transport.

Project Name: Construction of second tracks at sunset stretches on sections Iletsk – Zhaisan and Kyzylorda – Shieli
Project ID:
ECO ROUTE NUMBER: VI (6E-A), VII (7B-A)
Project Description: Increased bandwidth railroads Iletsk – Zhaisan (17.2 km) and Kyzylorda – Shieli (30 km)

Contact address/details:

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Iletsk**
End point/node/city **Shieli**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **no information**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design
☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☐ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….
…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?

Project Name: **Enhanced line Nikel'tau – Makat**
Project ID:
ECO ROUTE NUMBER: IV, VI
Project Description: Increasing transport capacity of the railway line Nikel'tau-Makat through phased construction of the second track on sunset stretches. Up to 2015 – strengthening land line Nikel'tau – Makat (180.5 km); after 2015 - Nikel'tau-Makat (163.2 km)

Contact address/details:

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Nikel'tau**
End point/node/city **Makat**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **no information**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design
☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☐ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….
…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?

Project Name: Strengthening of the Shu-Almaty
Project ID:
ECO ROUTE NUMBER: II, III, VII (7B-E)
Project Description: Increasing transport capacity of the railway line Shu-Almaty.
Development of design-budget documentation in 2011
Start of construction in 2012

Contact address/details:

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Shu**
End point/node/city **Almaty**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **no information**

Expected Starting Date: **is not defined**

Expected Completion Date: **is not defined**

IRR:

Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design
☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: …

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☐ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*: ……..**0**

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….
…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?

Project Name: Construction of a new railway Uzen- border of Turkmenistan
Project ID:
ECO ROUTE NUMBER: VI
Project Description: This project aims at the creation of additional transit routes directly connecting Kazakhstan and central regions of Russia, Turkmenistan, Iran, Persian Gulf countries, South and South-East Asia. Length of railway line on the territory of Kazakhstan will be 146 km.

Contact address/details: Joint-stock company National company Kazakhstan Temir Zholy

Section 1: Project Technical Characteristics
Location (latitude/longitude or alternatively a map):
Start point/node/city **Uzen**
End point/node/city **border of Turkmenistan**

Section 2: Project Information Concerning Criteria
ON-OFF CRITERION:
Serve for the development of a transport corridor within the ECO countries
YES ☒ NO ☐ ,

IF YES, PLEASE PROCEED:
Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ NO
If yes, the magnitude of impact is:
A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Section 3: Project Financial Information

Project costs (in million$): **422.0**

Expected Starting Date: **2009**

Expected Completion Date: **2011**

IRR:

Project's stage: ☒ Construction ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

Expected Funding Sources (and the % of funding for each one):

National Funds: 100 %

Foreign aid:…

Bank loans: …

Grants: …

Private Funds (PPP basis). Please provide details: **no information**

Other….

Foreign cooperation sought? ☐ YES ☒ NO

If yes, please describe…….

Expenses made so far (2010), as a percentage of the project's total cost: …….

GDP (year 2010 in million $)*:146.0

Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…….

…….

Reasons for which project implementation has been delayed, (if applicable)…..

Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

Other project-related information?

KYRGYZSTAN

Rail and related infrastructure Project Fiche

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

RAIL ROUTE II – EXTENSIONS
ECO-RAIL 2E-C: (Uzbekistan) Khavast-Bekabad-(border with Tajikistan)-Nau-Khudjand-P136- border with Uzbekistan-Fergana-Khanabad-(border with Kyrgystan)-Karasu-Osh/Jalal Abad-Kok Yangak
ECO-RAIL 2E -D: (Kazakhstan)-Lugovaya-Batyr-(border with Kyrgystan)-Kara Balta-**Bishkek-Rybachiye**-(ferry over lake Ysyk kol to Tyup)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE & ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[□]

Project Name: China-Kyrgyz-Uzbek trunk railway project
Project ID:
Project Description: Project's main idea is a creation of south corridor of Eurasian transcontinental trunk railway, which is to connect pacific ports with Persian Gulf and Mediterranean getting through the territory of Kyrgyzstan.
Rationale and Objectives:
- Shortcut from East Asia to the Middle East and South Europe countries by 900 km as well as reduction of transportation terms by 7-8 days;
- Development of transport infrastructure of Central Asia countries and provision of new carriageable access to the ports of Persian Gulf and Pacific Ocean;
- Encouragement of the development and employment of ample resources of trunk line-side countries;
- Activation of international commerce, tourism and economic cooperation as a whole.

Expected impacts and benefits: Construction of a new railway
Contact address/details:

Section 1. Project Technical Characteristics:

1. Location (latitude/longitude or alternatively a map):
2. Start point/node/city: Kara-Suu
3. End point/node/city: Torugart
4. AGC /AGTC Reference No. (if applicable):
5. Trans-Asian Railway (TAR): [V] YES [ ] NO
6. Length (in km): 268,4
7. Track gauge (mm): 1520
8. No of tracks (DT=double, ST=single): ST
9. Loading gauge (UIC):

□ The new projects in red have been identified. Please include any additional ones.

10. Traction: [ ] Electrified [V] Non-Electrified

11. Signaling type: [V] Automatic [ ] Manual

12. Maximum allowed speed - passenger trains: 80 km/h

13. Maximum allowed speed - freight trains: 50 km/h

14. Travel transit time pass/ freight trains(hours): 5/6

15. Maximum load per axle (tones): 23

16. Maximum capacity (trains/day):

17. Average Daily Train Traffic - Passenger trains[1]:

18. Average Daily Train Traffic - Freight trains[1]:

19. Expected (passenger) traffic increase (in % - both existing and generated):

20. Expected (freight) traffic increase (in % - both existing and generated)

21. Volume of cargo moved (tones and TEUs)[1]: 10-15 million tons per year

22. Current Bottleneck/Missing Links: Torugart-Kara-Suu

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES [V] **NO** [ ] **, IF YES, PLEASE PROCEED:**

23. Is the project serving international connectivity? [V] YES [ ] NO

If **yes** is it expected to: **A**

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

24. Will the project promote solutions to the particular transit transport needs of the landlocked countries? [V] YES [ ] NO

If **yes** the project is providing solution: **A**

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

25. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES [ ] NO

If **yes** the project is providing connection: **A**

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

26. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? [V] YES [ ] NO

If **yes,** the project contributes to the above: **A**

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

27. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? [V] YES [ ] NO

If **yes** the project is included in the national plan and: **A**

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

28. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? [V] YES NO

If **yes,** the magnitude of impact is: **B**

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

29. Project cost (in million$): $2000.0 million

    Out of which fixed investments:

30. Expected Starting Date: 2012

31. Expected Completion Date: 2018

32. IRR: 6.06

33. Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☑ Planning ☐ Identification

34. Expected Funding Sources (and the % of funding for each one):

    a. National Funds: …
    b. Foreign aid:…100%
    c. Bank loans: …
    d. Grants: …
    e. Private Funds (PPP basis). Please provide details……..…
    f. Other….

35. Foreign cooperation sought? ☑ YES ☐ NO

    If yes, please describe: foreign investments needed…….

36. Expenses made so far (2010), as a percentage of the project's total cost: ……

37. Percentage of budget of public works allocated: ……

38. GDP (year 2010 in million $): ……..

39. Implementation arrangements……

40. Critical success factors:…….

41. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
    ……

42. Reasons for which project implementation has been delayed, (if applicable)…..

43. Any relevant Documentation?

    Pre-feasibility study…….. ☑

    Feasibility study…….. ☐

    Technical Studies (Design etc)…… ☐

    Other……

44. Other project-related information?.....
    .....

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

RAIL ROUTE II – EXTENSIONS
ECO-RAIL 2E-C: (Uzbekistan) Khavast-Bekabad-(border with Tajikistan)-Nau-Khudjand-P136- border with Uzbekistan-Fergana-Khanabad-(border with Kyrgystan)-Karasu-Osh/Jalal Abad-Kok Yangak
ECO-RAIL 2E -D: (Kazakhstan)-Lugovaya-Batyr-(border with Kyrgystan)-Kara Balta-**Bishkek-Rybachiye**-(ferry over lake Ysyk kol to Tyup)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE & ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[□]

Project Name: "Balykchy-Kochkor-Kara-Keche-Arpa" railway project
Project ID:
Project Description: Project's main goal is connection of currently separated railways on the north and south of Kyrgyzstan and creation of internal network of railways
Rationale and Objectives:
- Transportation of coal by railway from Kara-Keche coal deposit
- Implementation of transit potential of Kyrgyzstan
Expected impacts and benefits: Construction of a new railway
Contact address/details:

Section 1. Project Technical Characteristics:

1. Location (latitude/longitude or alternatively a map):
2. Start point/node/city: Balykchy
3. End point/node/city: Arpa
4. AGC /AGTC Reference No. (if applicable):
5. Trans-Asian Railway (TAR): YES [V] NO [ ]
6. Length (in km): 358
7. Track gauge (mm): 1520
8. No of tracks (DT=double, ST=single): ST
9. Loading gauge (UIC): [ ] [V]
10. Traction: [V] Electrified [ ] Non-Electrified
11. Signaling type: Automatic Manual
12. Maximum allowed speed - passenger trains: 80 km/h
13. Maximum allowed speed - freight trains: 50 km/h
14. Travel transit time pass/ freight trains(hours): 7/8
15. Maximum load per axle (tones): 23
16. Maximum capacity (trains/day):
17. Average Daily Train Traffic - Passenger trains[1]:
18. Average Daily Train Traffic - Freight trains[1]:

□ The new projects in red have been identified. Please include any additional ones.

19. Expected (passenger) traffic increase (in % - both existing and generated):

20. Expected (freight) traffic increase (in % - both existing and generated)

21. Volume of cargo moved (tones and TEUs)[1]: 5-10 million tons per year

22. Current Bottleneck/Missing Links: Balykchy-Arpa

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES [V] **NO** [ ] **, IF YES, PLEASE PROCEED:**

23. Is the project serving international connectivity? [V] YES [ ] NO

If **yes** is it expected to: **B**

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

24. Will the project promote solutions to the particular transit transport needs of the landlocked countries? [V] YES [ ] NO

If **yes** the project is providing solution: **B**

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

25. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES [ ] NO

If **yes** the project is providing connection: **B**

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

26. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? [V] YES [ ] NO

If **yes,** the project contributes to the above: **B**

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

27. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? [V] YES [ ] NO

If **yes** the project is included in the national plan and: **B**

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

28. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? [V] YES NO

If **yes,** the magnitude of impact is: **B**

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

29. Project cost (in million$): not determined

    Out of which fixed investments:

30. Expected Starting Date: 2013

31. Expected Completion Date: 2019

32. IRR:

33. Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☑ Planning ☐ Identification

34. Expected Funding Sources (and the % of funding for each one):

    a. National Funds: …
    b. Foreign aid:…100%
    c. Bank loans: …
    d. Grants: …
    e. Private Funds (PPP basis). Please provide details……..…
    f. Other….

35. Foreign cooperation sought? ☑ YES ☐ NO

    If yes, please describe: foreign investments needed…….

36. Expenses made so far (2010), as a percentage of the project's total cost: ……

37. Percentage of budget of public works allocated: ……
38. GDP (year 2010 in million $): ……..
39. Implementation arrangements……
40. Critical success factors:…….
41. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
    ……
42. Reasons for which project implementation has been delayed, (if applicable)…..
43. Any relevant Documentation?

    Pre-feasibility study…….. ☑

    Feasibility study…….. ☐

    Technical Studies (Design etc)…… ☐

    Other……

44. Other project-related information?.....
    .....

RAIL INFRASTRUCTURE

Up-gradation of Quetta-Kohi Taftan section. (682 Km)

1.	Name of project	Up-gradation of Quetta-Kohi Taftan section. (682 Km)
2.	Estimated cost of project	Rs. 57355.00 Million.
3.	Rationale/ Justification	682 Km track between Quetta-Taftan and up to Iranian border is being rehabilitated to all weather track, fit for a speed of 120/85 Km/h. The up-graded Quetta-Taftan section will be an important part of the international route starting from China to Europe as conceived under Trans Asian South Corridor. The rehabilitation of this section has assumed urgency with the introduction of ECO container train from Islamabad to Istanbul via Iran traversing through this route. In this context, High commission of Islamic Republic of Iran has desired to connect the Quetta-Taftan section with Iranian Rail network to effectively operate the ECO container traffic
4.	Scope of work	• To improve / rehabilitate the track with UIC-54 rail, PSC sleeper, 30 cm ballast cushion with Vossloh fastening. • To increase the design speed to 120 Km/h against the present speed of 40 Km/h. • To reduce the number of curves and eliminate sharp curves. • To ease the existing grade of 1:50 to 1:100. • To upgrade/strengthen/replace the existing bridges for the increased speed and convert all existing dips into bridges. • To install the token-less Auto-Block signaling system and Modern Telecommunication facilities for safe train operation. • Better passenger amenities at station. • To exploit the benefit of Goods traffic from the development of natural resources on this route. • To introduce a speedy and safest trade rail route from Asia to Europe via Iran and Turkey. • Quick movement of bulk cargo with swift delivery of goods. • To provide opportunities of employment to the people of the area which would also help in the social up lift of the area.
5.	Benefits	Trade between Iran, Pakistan and Turkey will increase manifold.

New rail link for connecting Gwadar Port with existing Railway network at Mastung (901 Km)

1.	Name of project	New rail link for connecting Gwadar Port with existing Railway network at Mastung (901 Km).
2.	Estimated cost of project	Rs. 182268.40 Million
3.	Rationale/Justification	A deep sea port at Gwadar has been constructed by Ministry of Ports & Shipping being deep and hammer headed coast. This sea port started functioning in 2008. The rail link is considered absolutely essential for the optimum operation of the port to transport the goods from the port to up country and neighboring states i.e. Afghanistan, Iran and Central Asian Republics. In fact railway is the only transport system capable of heavy haulage of the minerals being extracted from vast mines of natural resources in Baluchistan such as iron ore, copper, coal and marble etc at Saindak and Rekodiq. The proposed rail link will also cater for the economic goods originating from its immediate neighboring country, Afghanistan in the first instance and from the Central Asian Republic (CARs) at a subsequent stage.
4.	Scope of work	It will be a broad gauge railway track with UIC-54 rail over pre-stressed concrete sleeper with continually welded rails. There will be about 30 to 35 railway station with 7 No. of tunnel. It would be fit for speed of 120 Km/h.
5.	Benefits	This rail link will facilitate mobility of passengers and transportation of other surplus transportable commodities originating from rural and urban areas in the province for further use at terminal markets of Pakistan. At a later stage when regional connectivity with Afghanistan, Iran and Central Asian Republics (CARs) is improved, and there is a political will on the part of respective governments of these countries to establish a mutual trade link between themselves, the significance and role of new Gwadar-Mastung Railway link will increase manifold.

Conversion of Bostan-Zhob section from NG to BG and providing new rail link between Zhob-D.I.Khan-Kotlajam (Near Bhakkar) (505 Km)

1.	Name of project	Conversion of Bostan-Zhob section from NG to BG and providing new rail link between Zhob-D.I.Khan-Kotlajam (Near Bhakar) (505 Km).
2.	Estimated cost of project	Rs. 73000.00 Million
3.	Rationale/Justification	The existing Narrow Gauge (NG) section of Bostan-Zhob was constructed during 1921-29 as a war line, purely on temporary basis using the released material whatsoever was available. The section was closed for traffic in 1991 due to its deteriorated conditions and huge operating loss as only one train was being operated with steam loco. The Project is designed to provide an alternative link of Quetta with Peshawar via D.I.Khan, Bannu and Kohat. It is further proposed to link it with Kotla Jam providing connectivity to remote and underdeveloped areas of Balochistan and Khyber Pakhtoon Khawa with southern Punjab, with lesser distance. The project area is rich in minerals especially, the coalmines of Lorali District of Baluchistan would get a boost. The project would accelerate the socio-economic progress of the poor and remote areas of Baluchistan by providing both safe passenger/freight facilities to the local public.
4.	Scope of work	It will be a broad gauge railway track with UIC-54 rail over pre-stressed concrete sleeper with continually welded rails. There will be 23 railway stations and will cross River Indus near D.I.Khan. It would be fit for speed of 120 Km/h.
5.	Benefits	As per feasibility report there is a potential of transportation of 0.905 million passengers in the first year after completion of the project, which would increase to 4.25 million by 2030. Similarly, freight handling capacity in the first year would be 0.855 million ton, which would increase to 3.14 million ton, by 2030.

Realignment of track from Kaluwal to Pindora (52 Km)

1.	Name of project	Realignment of track from Kaluwal to Pindora (52 Km).
2.	Estimated cost of project	Rs. 12900.00Million
3.	Rationale/Justification	On Lahore-Rawalpindi section, track from Kharian to Chaklala is laid on sharp curves and steep grades therefore, speed of the trains on this length of the section is restricted to 80/65 Km/h (Normal speed on similar track infrastructure is 110 Km/h). Similarly the hauling capacity of locomotive is also considerably decreased due to steep gradients. The permissible train load on this section is 1000 tonnes against normal grade permissible load of 2000 tonnes. One of the options is to completely realign the track on a new alignment between Kaluwal-Pindora.
4.	Scope of work	It will be new broad gauge track with UIC-54 rail over pre-stressed concrete sleepers, continually welded rails. The embankment could be mechanically compacted to a density of 95% AASHTO. It would be fit for a speed of 120 Km/h.
5.	Benefits	There will be reasonable saving in the traveling time and fuel consumption.

New rail link from Havelian (Pakistan) to Khanjurab (Pak-China Border) (682 Km)

1.	Name of project	New rail link from Havelian (Pakistan) to Khanjurab (Pak-China Border) (682 Km)
2.	Estimated cost of project	Rs. 879780.00 Million
3.	Rationale/Justification	It would provide a direct link between Pakistan and China, which mutual trade is bound to grow manifold in the future. The project would provide an opportunity to create a new international corridor to link China, Central Asian States & Russia.
4.	Scope of work	Pre-feasibility study for this link has since been carried out by two consulting foreign firms i.e. M/s ILF and DEC. Detailed feasibility is yet to be carried out for which PC-II amounting to Rs.475.000 Million is under process for approval of Ministry of Railways.
5.	Benefits	The project would fulfill the need of bilateral economic trade between Pakistan and China and would bring long term prosperity and countless benefits, for Pakistan. The project may also be helpful in transportation of heavy machinery and material for the proposed Hydro-electric Bhasha Diamer and other dams proposed on Indus River. In future Indus would be the Hub of energy.

New rail link between Peshawar and Jalalabad

1.	Name of project	New rail link between Peshawar and Jalalabad.
2.	Estimated cost of project	Cost would be determined after completion of feasibility study by Project Management Unit, Ministry of Railways.
3.	Rationale/Justification	Pakistan and Afghanistan are neighboring Islamic Countries, having brotherly traditional, socio-cultural and economic relations. Tremendous trade opportunities are available between the two countries which will increase with the passage of time. The only available transportation corridor is Jamrud-Jalalabad highway which has limited capacity. Hence to boost up trade, strengthen socio cultural relations and to open up the rugged and backward area, a Rail Link is necessary. It will provide new opportunities to explore the vast market of Central Asia and even in Russia.
4.	Scope of work	The length of new track from Landi Kotal (Pakistan) and Jalalabad (Afghanistan) is 75 Km and it will be a standard gauge with few tunnels. It will be further connected with Mazar-e-Sharif via Kabul having length of 450 Km.
5.	Benefits	Afghanistan is a land locked country and this route will provide most reasonable opportunity of transport for passenger as well as freight business. It will provide access to Pakistani sea ports and as such, this route would be one of the busiest and important links between the two neighbouring countries.

New rail link between Chaman (Pakistan) to Kandhar (Afghanistan) (107 Km)

1.	Name of project	New rail link between Chaman (Pakistan) to Kandhar (Afghanistan) (107 Km).
2.	Estimated cost of project	Rs. 13588.00 Million
3.	Rationale/Justification	A feasibility study for this new rail link was carried out during 2004. As a first step it was decided to construct rail link from Chaman to Spinboldak for a distance of 11.5 Km but the work could not be started for want of NOC by the Government of Afghanistan. Revised PC-I amounting to Rs.1100.00 Million sent to Ministry of Railways on 05-5-2009. The approval is still awaited.
4.	Scope of work	It will a broad gauge single track with UIC-54 rails over pre-stressed concrete sleepers, continually welded rails.
5.	Benefits	Afghanistan is a land locked country and this route will provide most reasonable opportunity of transport for passenger as well as freight business. It will provide access to Pakistani sea ports and as such, this route would be one of the busiest and important links between the two neighboring countries.

Provision of 3rd and 4th freight lines between Karachi-Kotri (2 x165 = 330 Km)

1.	Name of project	Provision of 3rd and 4th freight lines between Karachi-Kotri (2 x165 = 330 Km)
2.	Estimated cost of project	Rs.16929.00 Million.
3.	Rationale/ Justification	Most of the freight traffic originates from Karachi as Karachi and Bin Qasim Ports are being operated from Karachi. The freight traffic usually delayed or kept in wait on account of meager line capacity. The goods customers have to suffer for late arrival of their commodities at destination For smooth efficient and in time freight trains operations, it is proposed that present Up & Dn Lines be earmarked for passenger traffic and two new lines be provided parallel to the existing lines for goods traffic at least up to Kotri. Efficient goods / freight train operation will not only generate considerable Revenue but will ensure the punctuality of freight and passenger trains.
4.	Scope of work	The new broad gauge welded track will be laid with UIC-54 rails and pre-stressed concrete sleepers (PSC). The train will be run at a sectional speed of 85 Km/h.
5.	Benefits	Increase in the line capacity would directly affect the revenue generation of Pakistan Railways and convenience / comfort to the traders / importers, exporters.

Construction of new rail link from Kotla Jam (near Bhakkar) to Peshawar via D.I. Khan, Lakki Marwat, Bannu, Karak & Kohat (377 Km)

1.	Name of project	Construction of new rail link from Kotla Jam (near Bhakkar) to Peshawar via D.I. Khan, Lakki Marwat, Bannu, Karak & Kohat (377 Km).
2.	Estimated cost of project	Rs.57518.00 Million including FEC Rs.9852.00 Million.
3.	Rationale/ Justification	The proposed link will drastically reduce the travel distance by providing direct approach to Bannu, D.I. Khan and Laki Marwat Districts of Khyber Pakhtoon Khawa. It would provide passenger and freight facilities to the under developed and remote areas of Khyber Pakhtoon Khawa and open up new vistas of commercial activities and help in the social improvement of the entire area. The project is also linked with the project of conversion of Quetta-Bostan-Zhob section and will provide short and reliable link between Peshawar and Quetta. It is already proposed to improve Quetta-Taftan section to provide link with the Central Asian States and to provide new Rail Link with Gwadar Port. In this way this project would become an integral part of overall development of Baluchistan and Khyber Pakhtoon Khawa. Moreover it will be further linked with China for which pre-feasibility study for "New track from Havelian (Pakistan) to Khunjrab" has since been carried out. From Khunjrab to Kashghar (Kashi) the track will be laid by the Government of China.
4.	Scope of work	Broad gauge single line welded track will be laid with UIC-54 rails and (PSC) pre-stressed concrete sleepers. There will be about 59 Nos. of major bridges and 48 Nos. of manned level crossing. Number of passenger and goods trains will be operated over this newly laid track at the sectional speed of 95 /105 Km/hrs.
5.	Benefits	There is a potential of transportation of 2.26 million passengers in the first year after completion of the project, which would increase to 10.6 million by 2030. Similarly, freight handling capacity in the first year would be 2.35 million ton which would increase to 8.88 million ton by 2030. There is an ample possibility of construction of an inland container yard at D.I. Khan for handling Afghan Transit Trade through the Pak Afghan Border at Ghulam Abad. This would significantly reduce the traveling distance and time of train of Afghan transit Trade (GITA).

Provision of alternative route to link Sibi with Spezand bypassing Bolan pass (170 Km)

1.	Name of project	Provision of alternate route to link Sibi with Spezand bypassing Bolan pass (170 Km).
2.	Estimated cost of project	Rs.27200.00 Million. However, exact cost would be determined after carrying out feasibility study.
3.	Rationale/ Justification	The existing Sibi-Spezand section (116 Km) is a potential bottleneck in the operation of existing train services specially the ECO container train. The track is marked with steep gradients and sharp curves which is a serious constraint on trailing load per train. Up-gradation/improvement of the existing route from Sibi to Spezand is considered extremely difficult rather impossible keeping in view the rugged terrain. It has accordingly been proposed that an alternate route from Sibi to Spezand may be provided by-passing the Bolan to avoid steep gradients and sharp curves.
4.	Scope of work	The proposed railway track would be laid with UIC-54 / 60 long welded rails with pre-stressed mono block concrete sleepers at a density of 1640 sleepers per kilometer fitted with Vossloh / Nabla fastening system over 30 cm ballast cushion.
5.	Benefits	The present running time of passenger train from Sibi to Spezand is about 4 hour and that of goods train is 8 hour, which will be considerably reduced due to the proposed construction of track.

TAJIKISTAN

RAIL

ECO ROUTE NUMBER: RAIL ROUTE II - Turkey via Iran, Afghanistan, Tajikistan to Turkmenistan

RAIL ROUTE II – EXTENSIONS Ayvaj-Taganguzar-Khulm-Sherkhonbandar-Okina-Ilmomnazar (Turkmenistan)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE & ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[□]

Project Name: Construction of new railway line Ayvaj(Tajikistan) – Taganguzar-Khulm- (Afganistan)
Project ID:

Project Description: Construction of new railway line connecting Tajikistan, Islamic Republic of Afghanistan with Turkmenistan allows realize transportation of goods and passengers within Tajikistan territory from Russia, Kazakhstan and other interested CIS countries, as well China through Afghanistan to Iran, India, Pakistan, Turkey and others.

Rationale and Objectives:

Expected impacts and benefits: Improves international transit by railway

Contact address/details:
Ministry of transport of the Republic of Tajikistan
734042 Dushanbe
14 Ayni str.
Tel: +992 37 221 17 13
Fax: +992 37 221 20 03

Section 1. Project Technical Characteristics:

45. Location (latitude/longitude or alternatively a map):
46. Start point/node/city Ayvaj
47. End point/node/city Bridge to afghan border
48. AGC /AGTC Reference No. (if applicable):
49. Trans-Asian Railway (TAR): NO
50. Length (in km): 4 km
51. Track gauge (mm): 1435
52. No of tracks (DT=double, ST=single):
53. Loading gauge (UIC):

□ The new projects in red have been identified. Please include any additional ones.

54. Traction: ☐ Electrified ☐ Non-Electrified

55. Signaling type: ☐ Automatic ☐ Manual

56. Maximum allowed speed - passenger trains:

57. Maximum allowed speed - freight trains:

58. Travel transit time pass/ freight trains(hours):

59. Maximum load per axle (tones):

60. Maximum capacity (trains/day):

61. Average Daily Train Traffic - Passenger trains[1]:

62. Average Daily Train Traffic - Freight trains[1]:

63. Expected (passenger) traffic increase (in % - both existing and generated):

64. Expected (freight) traffic increase (in % - both existing and generated)

65. Volume of cargo moved (tones and TEUs)[1]:

66. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES NO , IF YES, PLEASE PROCEED:

67. Is the project serving international connectivity? YES NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

68. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ☐ YES ☐ NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

69. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

70. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

71. Will the project have a high degree of urgency due to importance attributed by

the national authorities and/or social interest? YES NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:
E: Not in the national plan.

72. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES NO

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

73. Project cost (in million$): 30,4

    Out of which fixed investments:

74. Expected Starting Date:

75. Expected Completion Date:

76. IRR:

77. Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

78. Expected Funding Sources (and the % of funding for each one):

    a. National Funds: …
    b. Foreign aid:…
    c. Bank loans: …
    d. Grants: …
    e. Private Funds (PPP basis). Please provide details……..…..
    f. Other….

79. Foreign cooperation sought? ☐ YES ☐ NO

    If yes, please describe investment proposal submitted to various financial institution

80. Expenses made so far (2010), as a percentage of the project's total cost: ……

81. Percentage of budget of public works allocated: ……
82. GDP (year 2010 in million $): ……..
83. Implementation arrangements……
84. Critical success factors:……
85. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
    ……
86. Reasons for which project implementation has been delayed, (if applicable)…..
87. Any relevant Documentation?

    Pre-feasibility study…….. ☐

    Feasibility study…….. ☐

    Technical Studies (Design etc)…… ☐

    Other……

88. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Iran, Afghanistan to Tajikistan

RAIL ROUTE III – EXTENSIONS Kolhozabad - Nijniy Pyanj- Kunduz

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE & ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[□]

Project Name: Construction of Kolkhozabad-Nijniy Pyanj-Kunduz (Afghan border)

Project ID:

Project Description: Construction of a new railway line aims to create new transportation opportunity for the country and allow other countries to reach Afghanistan using transit potential of Tajikistan

Rationale and Objectives: Improve trade volume in the region

Expected impacts and benefits: Reduce transportation costs

Contact address/details:
Ministry of transport of the Republic of Tajikistan
734042 Dushanbe
14 Ayni str.
Tel: +992 37 221 17 13
Fax: +992 37 221 20 03

Section 1. Project Technical Characteristics:

89. Location (latitude/longitude or alternatively a map):
90. Start point/node/city Kolkhozabad
91. End point/node/city Nijniy Pyanj
92. AGC /AGTC Reference No. (if applicable):
93. Trans-Asian Railway (TAR): NO
94. Length (in km): 50 km
95. Track gauge (mm): 1435
96. No of tracks (DT=double, ST=single):
97. Loading gauge (UIC):
98. Traction: Electrified Non-Electrified
99. Signaling type: Automatic ☐ Manual
100. Maximum allowed speed - passenger trains:
101. Maximum allowed speed - freight trains:
102. Travel transit time pass/ freight trains(hours):
103. Maximum load per axle (tones):
104. Maximum capacity (trains/day):

□ The new projects in red have been identified. Please include any additional ones.

105. Average Daily Train Traffic - Passenger trains[1]:

106. Average Daily Train Traffic - Freight trains[1]:

107. Expected (passenger) traffic increase (in % - both existing and generated):

108. Expected (freight) traffic increase (in % - both existing and generated)

109. Volume of cargo moved (tones and TEUs)[1]:

110. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES NO , IF YES, PLEASE PROCEED:

111. Is the project serving international connectivity? YES NO

If **yes** is it expected to: connect

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

112. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

113. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

114. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

115. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,
If the project is not included in the national plan:
E: Not in the national plan.

116. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES NO

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

117. Project cost (in million$): 90

Out of which fixed investments:

118. Expected Starting Date:

119. Expected Completion Date:

120. IRR:

121. Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

122. Expected Funding Sources (and the % of funding for each one):

a. National Funds: …
b. Foreign aid:
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

123. Foreign cooperation sought? YES NO

If yes, please describe:

Expenses made so far (2010), as a percentage of the project's total cost: ……

124. Percentage of budget of public works allocated: ……
125. GDP (year 2010 in million $): ……..
126. Implementation arrangements……
127. Critical success factors:……
128. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
……
129. Reasons for which project implementation has been delayed, (if applicable)…..
130. Any relevant Documentation?

Pre-feasibility study is ongoing ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other……

131. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Iran, Afghanistan to Tajikistan with access to Kyrgyzstan

RAIL ROUTE III – EXTENSIONS Dushanbe-Vahdat-Karamik (Kyrgyz border)

PLEASE COMPLETE THE FOLLOWING TEMPLATE FOR ANY NEW PROJECT ALONG THIS ROUTE & ITS EXTENSIONS AND BRANCHES (IF APPLICABLE)[□]

Project Name: Construction of Vahdat – Karamyk railway

Project ID:

Project Description: Construction of a new line to connect Tajikistan with Kyrgyzstan with further connection to China

Rationale and Objectives: Create a new railway network connecting China with Iran through the territory of Kyrgyzstan-Tajikistan and Afghanistan

Expected impacts and benefits: creation of a regional network

Contact address/details:
Ministry of transport of the Republic of Tajikistan
734042 Dushanbe
14 Ayni str.
Tel: +992 37 221 17 13
Fax: +992 37 221 20 03

Section 1. Project Technical Characteristics:

132. Location (latitude/longitude or alternatively a map):
133. Start point/node/city Vahdat\ilyak station
134. End point/node/city Karamyk (border point with Kyrgyzstan)
135. AGC /AGTC Reference No. (if applicable):
136. Trans-Asian Railway (TAR): NO
137. Length (in km): about 296 km
138. Track gauge (mm): 1435
139. No of tracks (DT=double, ST=single):
140. Loading gauge (UIC):
141. Traction: Electrified Non-Electrified
142. Signaling type: Automa[ ] Manual
143. Maximum allowed speed - passenger trains:
144. Maximum allowed speed - freight trains:
145. Travel transit time pass/ freight trains(hours):
146. Maximum load per axle (tones):

□ The new projects in red have been identified. Please include any additional ones.

147. Maximum capacity (trains/day):

148. Average Daily Train Traffic - Passenger trains[1]:

149. Average Daily Train Traffic - Freight trains[1]:

150. Expected (passenger) traffic increase (in % - both existing and generated):

151. Expected (freight) traffic increase (in % - both existing and generated)

152. Volume of cargo moved (tones and TEUs)[1]:

153. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries

YES NO , IF YES, PLEASE PROCEED:

154. Is the project serving international connectivity? YES NO

If **yes** is it expected to: connect

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

155. Will the project promote solutions to the particular transit transport needs of the landlocked countries? YES NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

156. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? YES NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

157. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links? YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

158. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? YES NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

159. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES NO

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

160. Project cost (in million$): around 3 billion

Out of which fixed investments:

161. Expected Starting Date:

162. Expected Completion Date:

163. IRR:

164. Project's stage: ☐ Construction ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

165. Expected Funding Sources (and the % of funding for each one):

a. National Funds: …
b. Foreign aid:
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

166. Foreign cooperation sought? YES NO

If yes, please describe:

Expenses made so far (2010), as a percentage of the project's total cost: ……

167. Percentage of budget of public works allocated: ……
168. GDP (year 2010 in million $): ……..
169. Implementation arrangements……
170. Critical success factors:…….
171. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……..
……
172. Reasons for which project implementation has been delayed, (if applicable)…..
173. Any relevant Documentation?

Pre-feasibility study ☐

Feasibility study…….. ☐

Technical Studies (Design etc)

174. Other project-related information?

TURKEY

RAIL TRANSPORT INFRASTRUCTURE

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I/II - BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Georgia, Azerbaijan, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))

ECO ROUTE NUMBER: RAIL ROUTE IV-Turkey via Azerbaijan, Caspian sea to Kazakhstan (Istanbul to Shcherbakty -Russian Borders)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Arifiye-Eskisehir-Ankara-Kirikkale-Yerkoy-Sivas (new alignment via Yozgat)-Cetinkaya-Kars-Mezra-missing link: Aktas-border with Georgia-gauge change to 1536mm (non ECO country: [missing link: Border with Turkey-Ahalkalaki]-route in Georgia through Tbilisi- border with Azerbaijan)

Project Name: **Ankara – Istanbul High Speed Train Project**

Project ID:

Project Description: **Ankara – Istanbul railway line section serves to passenger and freight transport both for the region and for the whole rail network. The existing railway line consists of double track conventional line with a maximum operational speed of 120 kph along with telecommunication, signalling and electrification systems. Regarding the whole upgrading investment of the railway line between Ankara and Istanbul, there are several projects ongoing, which all contribute to a higher safety level, higher efficiency and faster rail services along the Ankara – Istanbul Corridor.**

Ankara-Istanbul High Speed Train Project (AIHSTP) connects Istanbul to Ankara via Eskisehir. The whole project covers railway lines of totalling 533 km in length. The section between Ankara and Eskisehir has been completed in 2008, which is 197 km in length excluding urban transport sections, and high speed train operations have been provided between Ankara and Eskisehir since March 2009. The section between Eskisehir and Köseköy, which is 188 km in length, is under construction. Works in this section include construction of a new double

track high speed railway line along with new signalling, electrification and telecommunication systems. Construction works in Kosekoy – Gebze section will start in August 2011 with construction duration of 30 months.

The AIHST route comprises the following sections:

- **Ankara – Sincan (24km);**
- **Sincan – Esenkent (15km);**
- **Esenkent – Eskisehir (206km);**
- **Eskisehir – Inonu (30km);**
- **Inonu – Köseköy (158 km);**
- **Köseköy – Gebze. (56 km)**

Rationale and Objectives: **Ankara-Istanbul corridor is the busiest route of Turkey in terms of railway. At present, there are three transportation alternatives from Istanbul to Ankara: motorway, state highway and single-track railway.**

The existing Istanbul-Ankara line is single track over approximately 75% of its length. There are double track sections between Istanbul (Haydarpasa Station) and Kosekoy, then intermittently, from İnonu to Eskisehir, and again from Sincan to Ankara. Considering existing railway, since geometric standards and physical condition are low, superstructure is worn-out and operation is on single line, it is impossible to reach high speed. Low speeds, old infrastructure and travel time between Ankara – Istanbul of around 8 hours compared to the travel time of 4.5 hours on the state highway explain the disadvantages of the existing single track railway compared to the highway.

High speed railway line geometric standards dictate the need for a new alignment, and double tracks. Construction of high speed railway between Ankara and Istanbul will help Turkey to boost economic and regional development. This corridor, being one of the most important traffic arteries of the existing network, provides access to Europe following Istanbul. Similarly, following Ankara and East Anatolia, one can reach to Caucasia and Russia on one side and to Iran on the other, through which access to Middle Asia and Far East is possible. Furthermore, it is possible to reach Middle East through Ankara following the Mediterranean. Therefore, in order to provide a time-efficient, comfortable and safe transportation opportunity, AIHSTP is carried out by TCDD.

The project supports the general objective of development of transport via the country's main cities and constitutes therefore a very important element of coordinated intermodal transport in Turkey.

Istanbul itself is one of the world's largest cities, exceeding 10 million inhabitants. The Turkish capital, Ankara, has a population of 3.5 million. Ankara is the main transit node for both rail and road networks linking eastern and western Turkey. Eskisehir, approximately midway between Istanbul and Ankara along the rail corridor, is an important university city and a bustling commercial and administrative centre. Construction of high speed railway between Istanbul and Ankara will provide a time-efficient, comfortable and safe transportation opportunity. The project will make a contribution to mitigate the bottleneck situation of the long travelling time between Ankara and Istanbul.

The project is carried out in order to provide a time-efficient, comfortable and safe transportation system. The major objectives of the Project are summarized below:

- **Transport time savings for passengers**

- **Improved transport safety and comfort**
- **Improved transport reliability**
- **Increased share of railway in the national transportation network**
- **Decreased traffic load on the state highway between Ankara and Istanbul**
- **Minimized environmental pollution due to exhaust gases**
- **Decreased accident rates**

Expected impacts and benefits: **Travel time for the time being is around 7-8 hours and will be around 3 hours when the project is completed. The existing passenger traffic on rail will be shifted to new high speed line and existing line, which has a capacity of 37 trains / day, will be mainly used for freight transport. Consequently more capacity will be available for freight trains. The existing line is 576 km and will decrease to 533 km in length.**

New HST line will be installed ERTMS with GSM-R systems, which will ensure interoperable rail transport with higher level of safety.

New construction of a railway line on future TEN-T railway network or in connection with existing TEN-T

Contact address/details:

Section 1. Project Technical Characteristics:

175. Location (latitude/longitude or alternatively a map):

176. Start point/node/city: **Ankara**

177. End point/node/city : **Istanbul**

178. AGC /AGTC Reference No. (if applicable): **C-E70**

179. Trans-Asian Railway (TAR): ■ **YES** ☐ NO

180. Length (in km): **533**

181. Track gauge (mm):**1435**

182. No of tracks (DT=double, ST=single):**DT**

183. Loading gauge (UIC): **GC**

184. Tractio[redacted] **Electrified** ☐ Non-Electrified

185. Signaling type[redacted] **Automatic** ☐ Manual

186. Maximum allowed speed - passenger trains: **250 km/h**

187. Maximum allowed speed - freight trains: **65 (The capacity of the existing conventional line will mainly be dedicated to freight transport).**

188. Travel transit time pass/ freight trains (hours): **for the time being 7h; 3h.10 m. after project / for the time being 10 h.**

189. Maximum load per axle (tones): **22,5**

190. Maximum capacity (trains/day): **200**

191. Average Daily Train Traffic - Passenger trains[1]: **For the time being; 22 HST between Ankara – Eskisehir; after project completion, it is expected to carry 9 million pax / year.**

192. Average Daily Train Traffic - Freight trains[1]: **The capacity of the existing conventional line will mainly be dedicated to freight transport.**

193. Expected (passenger) traffic increase (in % - both existing and generated): **780%**

194. Expected (freight) traffic increase (in % - both existing and generated) **The capacity of the existing conventional line will mainly be dedicated to freight transport.**

195. Volume of cargo moved (tones and TEUs)[1]:

Haydarpaşa-Gebze	**1.2 Million tones**
Gebze-Arifiye	**2.5 Million tones**
Arifiye-Eskişehir	**3.4 Million tones**
Polatlı-Eskişehir	**3.9 Million tones**
Sincan-Polatlı	**3.6 Million tones**
Marşandiz-Sincan	**3.9 Million tones**
Ankara-Marşandiz	**2.1 Million tones**

196. Current Bottleneck/Missing Links: **n.a**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES** **N[redacted], IF YES PLEASE PROCEED:**

197. Is the project serving international connectivity? [redacted] **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

198. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, **C: Somewhat,** D: Slightly, E: Does not

199. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ **YES** ☐ NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

200. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links?

■ **YES** ☐ NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

201. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

202. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

203. Project cost (in million$): **2820 million €**

204. Out of which fixed investments: **National Budget and Bank Loan**

205. Expected Starting Date: **2003**

206. Expected Completion Date: **2013**

207. IRR: **Economic RR 6,8%**

208. Project's stage: ■ **Construction** ☐ Tendering ☐ Study/Design

☐ ☐

Planning Identification

209. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **7%**

b. Foreign aid:…

c. Bank loans: **93%**

d. Grants: …

e. Private Funds (PPP basis). Please provide details……..…..

f. Other….

210. Foreign cooperation sough☐ YES ■ **NO**

If yes, please describe…….

211. Expenses made so far (2010), as a percentage of the project's total cost: **70%**

212. Percentage of budget of public works allocated: **7%**

213. GDP (year 2010 in million $): **736**

214. Implementation arrangements……

215. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

216. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…… **n.a**

217. Reasons for which project implementation has been delayed, (if applicable) **juridical period during tendering process**

218. Any relevant Documentation?

Pre-feasibility study…….. ■

Feasibility study…….. ■

Technical Studies (Design etc)…… ■

Other…**Environmental Impact Analysis**……

219. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B: Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Georgia, Azerbaijan, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))

ECO ROUTE NUMBER: RAIL ROUTE IV-Turkey via Azerbaijan, Caspian sea to Kazakhstan (Istanbul to Shcherbakty -Russian Borders)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Arifiye-Eskisehir-Ankara-Kirikkale-Yerkoy-Sivas (new alignment via Yozgat)-Cetinkaya-Kars-Mezra-missing link: Aktas-border with Georgia-gauge change to 1536mm (non ECO country: [missing link: Border with Turkey-Akhalkalaki]-route in Georgia through Tbilisi- border with Azerbaijan)

Project Name: **Marmaray Project**

Project ID:

Project Description: **Marmaray Project covers the railway line between Halkali – Sirkeci (Istanbul) – Tube Tunnel under Istanbul Strait - Haydarpasa (Istanbul) – Gebze with a total length of 76 km. The construction of the project started in 2004 for tube tunnel part of the project and upgrading of the Istanbul – Gebze section (44 km) will start in 2011. The whole exiting double-track railway line will be reconstructed and additional third track will be laid. New signalling, electrification and telecommunication systems shall be installed along the route.**

Rationale and Objectives: **The existing railway line serves both to commuter transport and long-distance rail transport. The capacity of the existing double-track railway line and lack of uninterrupted rail link over Istanbul Strait does not meet transport demand arising from commuter traffic and long-distance traffic. Connection between both shores of Istanbul is, for the time being, provided with ferry services having a limited capacity of freight. In order to ensure uninterrupted rail connection along the route, the existing railway line will be reconstructed with new systems and double-track rail tunnel will be constructed. The objective of the project is to improve the quality of transport services by increasing the traffic capacity, safety, operational speed and develop commuter transport in Istanbul.**

Expected impacts and benefits: **Travel time will be decreased when the project is completed. Freight and passenger transport will be ensured uninterruptedly between Asia and Europe with higher transport capacity.**

New line will be installed ERTMS with GSM-R systems, which will ensure interoperable rail transport with higher level of safety.

New construction of a railway line on future TEN-T railway network or in connection with existing TEN-T

Contact address/details:

Section 1. Project Technical Characteristics:

220. Location (latitude/longitude or alternatively a map):

221. Start point/node/city **Gebze**

222. End point/node/city **Halkali**

223. AGC /AGTC Reference No. (if applicable): **C-E70**

224. Trans-Asian Railway (TAR) ■ **YES** ☐ NO

225. Length (in km): **76,7**

226. Track gauge (mm): **1435**

227. No of tracks (DT=double, ST=single): **3-tracks (DT in Tunnel)**

228. Loading gauge (UIC):**GA**

229. Traction: ■ **Electrified** ☐ Non-Electrified

230. Signaling type: ■ **Automatic** ☐ Manual

231. Maximum allowed speed - passenger trains: **140**

232. Maximum allowed speed - freight trains: **65**

233. Travel transit time pass/ freight trains (hours): **around 1 h.**

234. Maximum load per axle (tones):**22,5**

235. Maximum capacity (trains/day):

236. Average Daily Train Traffic - Passenger trains[1]:

237. Average Daily Train Traffic - Freight trains[1]:

238. Expected (passenger) traffic increase (in % - both existing and generated):

239. Expected (freight) traffic increase (in % - both existing and generated):

240. Volume of cargo moved (tones and TEUs)[1]:

Sirkeci-Halkalı	**0,5 Million tones**
Haydarpaşa-Gebze	**1.2 Million tones**

With construction of tunnel, additional freight will be shifted from orts in Istanbul, Derince etc to this line section for uninterrupted transport

241. Current Bottleneck/Missing Links: **ferry link on Istanbul Strait**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES NO ■ , IF YES, ☐ EASE PROCEED:**

242. Is the project serving international connectivity? ■ **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

243. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, **C: Somewhat,** D: Slightly, E: Does not

244. Will the project connect low income and/or least developed countries/regions ■ with ECO member states, major European, and Asian markets?

YES ☐ NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

245. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links?

■ **YES** ☐ NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

246. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

247. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

248. Project cost (in million$): **3825 / 2000 million €**

249. Out of which fixed investments:

250. Expected Starting Date: **2004**

251. Expected Completion Date: **2013**

252. IRR: **n.a.**

253. Project's stage: ■ **Construction** ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

254. Expected Funding Sources (and the % of funding for each one):

a. National Funds**10%**
b. Foreign aid:…
c. Bank loans: **52% (EIB) + 38 % (JBIC)**
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

255. Foreign cooperation sought ☐ YES ■ **NO**

If yes, please describe…….

256. Expenses made so far (2010), as a percentage of the project's total cost: ……..

257. Percentage of budget of public works allocated: …**n.a**….

258. GDP (year 2010 in million $): **736**

259. Implementation arrangements… **n.a**.……

260. Critical success factors: **governmental support, availability of funds, cooperation**

between stakeholders,

261. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)… **n.a**……...

262. Reasons for which project implementation has been delayed, (if applicable) **n.a**.

263. Any relevant Documentation?

Pre-feasibility study……..

Feasibility study……..

Technical Studies (Design etc)……

Other…… **Environmental Impact Analysis** ……

264. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Bogazkopru – Ulukisla, Ulukisla-Yenice, Mersin – Adana – Toprakkale Signaling, Telecommunication and Station Extension Project + Electrification Project**

Project ID:

Project Description: **The existing railway line will be rehabilitated with station loop extensions, new signaling and telecommunication systems will be installed during the years of 2008 – 2012. Within the scope of electrification project; new electrification system will be installed along the route during the years of 2011 – 2015.**

Rationale and Objectives: **The existing line section is equipped with mechanical systems located at station entrances on both sides for traffic management, which are controlled by station masters according to orders of dispatcher; the existing situation hinders dense rail traffic flow due to capacity shortage. The existing traffic system lets trains follow each other with headway of station-by-station. Some stations are closed due to lack of staff at stations.**

Therefore the whole line section consisting of 78 km double-track and 349 km single track will be signaled and its infrastructure will be upgraded for higher operational speed and higher line capacity. Additionally construction of buildings and procurement of railway equipments for signaling systems will be realized within the scope of the project.

The railway line has potential passenger and freight traffic nevertheless poor characteristics of the line prevents efficient rail transport. The establishment of signaling systems and upgrading the rail infrastructure shall increase line capacity and capability that transport of commercial and agricultural goods as well as passenger will be provided faster. Furthermore the railway lines are located at the rail axis determined by High Level Group and are within UN-ECE Euro-Asian Transport Link, AGC, AGTC, TER Network as well as proposed for EUROMED.

Expected impacts and benefits:

- **The signaling system will shorten headway, increase operational speed and line capacity.**
- **Line capacity will be increased with higher level of safety, efficiency of rail transport will be ensured with automatic signaling system, closed stations will be opened.**

- **Signaling system will provide staff and time saving compared to existing system, such case will ensure cost saving for actors in railways.**
- **Improvement in capacity and safety at domestic and international rail transport along North – South direction, particularly to/from Mediterranean countries via Ports in Mersin and Iskenderun**
- **Uninterrupted rail connection with high capacity due to a signaling system.**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**

Contact address/details:

Section 1. Project Technical Characteristics:

265. Location (latitude/longitude or alternatively a map):

266. Start point/node/city **Bogazkopru (Kayseri)-Ulukisla-Yenice,**

267. End point/node/city **Mersin-Yenice-Adana-Toprakkale**

268. AGC /AGTC Reference No. (if applicable):**C-E7O / C-E97**

269. Trans-Asian Railway (TAR) ■ **YE** ☐ NO

270. Length (in km): **438**

271. Track gauge (mm):**1435**

272. No of tracks (DT=double, ST=single):**DT-8O km and ST-385 km**

273. Loading gauge (UIC): **GA**

274. Traction: ■ **Electrified** ☐ Non-Electrified

275. Signaling type: ■ **Automatic** ☐ Manual

276. Maximum allowed speed - passenger trains: **120**

277. Maximum allowed speed - freight trains: **65**

278. Travel transit time pass/ freight trains(hours):

Mersin – Adana **Existing T.T:53 Min.---- Projected. T.T:40 Min.**

Yenice – Ulukisla **Existing T.T:128 Min.---Projected T.T:90 Min.**

Bogazkopru– Ulukisla **Existing T.T:168 Min.--- Projected T.T:120 Min.**

279. Maximum load per axle (tones): **22,5**

280. Maximum capacity (trains/day): **after project;**

Bogazkopru-Ulukisla: 30 trains/day

Ulukisla-Yenice: 32 trains/day

Mersin-Toprakkale: 182 trains/day

281. Average Daily Train Traffic - Passenger trains[1]: **for the time being; 2 trains/day**

282. Average Daily Train Traffic - Freight trains[1]: **for the time being; 12 trains/day**

283. Expected (passenger) traffic increase (in % - both existing and generated): **25-30%**

284. Expected (freight) traffic increase (in % - both existing and generated) **25-30%**

285. Volume of cargo moved (tones and TEUs)[1]:

Ulukisla-Yenice 8.3 Million tones in 2010

Yenice-Mersin 2.5 Million tones in 2010

Yenice-Adana 6.5 Million tones in 2010

Adana-Toprakkale 7.0 Million tones in 2010

286. Current Bottleneck/Missing Links: **Line capacity, closed stations**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES** **NO** ■ **, IF YES** ☐ **LEASE PROCEED:**

287. Is the project serving international connectivity? ■ **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

288. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, **B: Significantly,** C: Somewhat, D: Slightly, E: Does not

289. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

☒ YES ☐ NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

290. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fill missing links?
YES NO

If **yes,** the project contributes to the above:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

291. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ☒ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

292. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ☒ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

293. Project cost (in million$): **136,25 million €(rehabilitation+signaling) +68 million €(electrification)**

294. Out of which fixed investments: **National Budget and Bank Loan**

295. Expected Starting Date: **2008-2011**

296. Expected Completion Date: **2012-2015**

297. IRR: **Economic IRR 128%; Financial IRR 110%;**

298. Project's stage: ☒ **Construction** ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

299. Expected Funding Sources (and the % of funding for each one):

a. National Funds:**15%**
b. Foreign aid:…
c. Bank loans: **85%**

d. Grants: …

e. Private Funds (PPP basis). Please provide details……..…..

f. Other….

300. Foreign cooperation sough☐ YES ■ NO

If yes, please describe…….

301. Expenses made so far (2010), as a percentage of the project's total cost: **28%**

302. Percentage of budget of public works allocated: **15%** ……

303. GDP (year 2010 in million $): **736**……..

304. Implementation arrangements… **n.a.** ……

305. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

306. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)… **n.a.**

307. Reasons for which project implementation has been delayed, (if applicable) **n.a.**

308. Any relevant Documentation?

Pre-feasibility study…….. ■

Feasibility study…….. ■

Technical Studies (Design etc)…… ■

Other……

309. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Georgia, Azerbaijan, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))

ECO ROUTE NUMBER: RAIL ROUTE IV-Turkey via Azerbaijan, Caspian sea to Kazakhstan (Istanbul to Shcherbakty -Russian Borders)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Arifiye-Eskisehir-Ankara-Kirikkale-Yerkoy-Sivas (new alignment via Yozgat)-Cetinkaya-Kars-Mezra-missing link: Aktas-border with Georgia-gauge change to 1536mm (non ECO country: [missing link: Border with Turkey-Ahalkalaki]-route in Georgia through Tbilisi- border with Azerbaijan)

Project Name: **Ankara-Sivas High Speed Train Project**

Project ID:

Project Description: **The existing line goes through Ankara - Kayseri - Sivas, which is 607 km in length. With Ankara-Sivas High Speed Train Project, new double track high seed line with signalling, electrification and communication systems will be constructed, 461 km in length, along with constituting the East-West axis in the high speed train line and shortening of the current traveling time from 12 hours to 3 hours.**

The construction of Yerkoy-Sivas division, 287 km in length, started in March 2009, which is planned to be completed in the first stage and the related infrastructure works are continuing.

After finalization of the implementation projects and the tendering process for new HST Line between Ankara (Kayas) and Yerkoy and upgrading the standards of line geometry and displacement of the exiting line, construction will be realized as the second stage of Ankara Sivas Railway Project.

Rationale and Objectives: **Ankara-Sivas corridor is one of the main routes of Turkey in terms of railway linking east and west. At present, there are two transportation alternatives**

between Sivas and Ankara: state highway and single-track railway.

The existing Ankara -Sivas line is mostly single track with signalling and communication systems and goes through Kayseri. Considering existing railway, since geometric standards and physical condition are low, superstructure is worn-out and operation is on single line, it is impossible to reach high speed. Low speeds, old infrastructure and travel time between Ankara – Sivas of around 12 hours compared to the travel time of 3 hours on the state highway explain the disadvantages of the existing single track railway compared to the highway.

High speed railway line geometric standards dictate the need for a new alignment, and double tracks. Construction of high speed railway between Ankara and Sivas will help Turkey to boost economic and regional development. This corridor, being one of the most important traffic arteries of the existing network, provides linkage between Europe and Asia. Similarly, following Ankara and East Anatolia, one can reach to Caucasia and Russia on one side and to Iran on the other, through which access to Middle Asia and Far East is possible.

The project supports the general objective of development of transport via the country's main cities and constitutes therefore a very important element of coordinated intermodal transport in Turkey.

The Turkish capital, Ankara, has a population of 3.5 million. Ankara is the main transit node for both rail and road networks linking eastern and western Turkey. Construction of high speed railway between Sivas and Ankara will provide a time-efficient, comfortable and safe transportation opportunity. The project will make a contribution to mitigate the bottleneck situation of the long travelling time between Ankara and Sivas.

The project is carried out in order to provide a time-efficient, comfortable and safe transportation system. The major objectives of the Project are summarized below:

- **Transport time savings for passengers**
- **Improved transport safety and comfort**
- **Improved transport reliability**
- **Increased share of railway in the national transportation network**
- **Decreased traffic load on the state highway between Ankara and Sivas**
- **Minimized environmental pollution due to exhaust gases**
- **Decreased accident rates**

Expected impacts and benefits: **Travel time for the time being is around 12 hours and will be around 2,5 hours when the project is completed. The existing passenger traffic on rail will be shifted to new high speed line and existing line, which has a capacity of 56 trains / day, will be mainly used for freight transport. Consequently more capacity will be available for freight trains. The existing line is 607 km and will decrease to 461 km in length.**

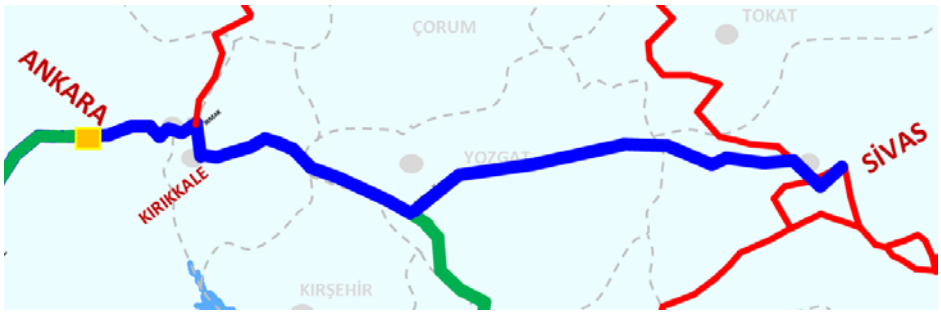
New HST line will be installed ERTMS with GSM-R systems, which will ensure interoperable rail transport with higher level of safety.

New construction of a railway line on future TEN-T railway network or in connection with existing TEN-T

Contact address/details:

Section 1. Project Technical Characteristics:

310. Location (latitude/longitude or alternatively a map):



311. Start point/node/city **Ankara**

312. End point/node/city **Sivas**

313. AGC /AGTC Reference No. (if applicable):**C-E7O**

314. Trans-Asian Railway (TAR) ■ **YES** ☐ NO

315. Length (in km): **461**

316. Track gauge (mm):**1435**

317. No of tracks (DT=double, ST=single):**DT**

318. Loading gauge (UIC):**GC**

319. Traction: ■ **Electrified** ☐ Non-Electrified

320. Signalling type: ■ **Automatic** ☐ Manual

321. Maximum allowed speed - passenger trains:**250**

322. Maximum allowed speed - freight trains: **65 (The capacity of the existing conventional line will mainly be dedicated to freight transport)**

323. Travel transit time pass/ freight trains(hours): **for the time being 10 h; 2,5 h after project / for the time being 14 h; 13 h after project**

324. Maximum load per axle (tones): **22,5**

325. Maximum capacity (trains/day): **n.a.**

326. Average Daily Train Traffic - Passenger trains[1]: **for the time being 10.**

327. Average Daily Train Traffic - Freight trains[1]: **for the time being 10 (The capacity of the existing conventional line will mainly be dedicated to freight transport).**

328. Expected (passenger) traffic increase (in % - both existing and generated):

329. Expected (freight) traffic increase (in % - both existing and generated): **The capacity of the existing conventional line will mainly be dedicated to freight transport.**

330. Volume of cargo moved (tones and TEUs)[1]:

Ankara - Kayas	**2,8 Million Tones**
Kayas-Irmak	**2.8 Million Tones**
Irmak-Bogazkopru	**3.6 Million Tones**
Bogazkopru-Kayseri	**4.8 Million Tones**
Kayseri - Hanli	**1.6 Million Tones**
Hanli - Bostankaya	**0,8 Million Tones**

Sivas - Bostankaya 2.8 Million Tones

The capacity of the existing conventional line will mainly be dedicated to freight transport.

331. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries
YES NO , IF YES PLEASE PROCEED:

332. Is the project serving international connectivity? YES NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

333. Will the project promote solutions to the particular transit transport needs of the landlocked countries? **YES** NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

334. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

YES NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

335. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or missing links?
YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

336. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? **YES** NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

337. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ■ YES ☐ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

338. Project cost (in million$): **1102 million €**

339. Out of which fixed investments: **National Budget**

340. Expected Starting Date: **2007**

341. Expected Completion Date: **2014**

342. IRR:**10%**

343. Project's stage: ■ **Construction** ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

344. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **100%**
b. Foreign aid:…
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

345. Foreign cooperation sought: ☐ YES ■ **NO**

If yes, please describe…….

346. Expenses made so far (2010), as a percentage of the project's total cost:**16%**

347. Percentage of budget of public works allocated: **100%**……

348. GDP (year 2010 in million $): **736**

349. Implementation arrangements… **n.a.** ……

350. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

351. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)……**n.a.**…….

352. Reasons for which project implementation has been delayed, (if applicable) **n.a**.

353. Any relevant Documentation?

Pre-feasibility study…….. ■

Feasibility study…….. ■

Technical Studies (Design etc)…… ■

Other……

354. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Ankara-Izmir High Speed Train Project**

Project ID:

Project Description: **The existing line goes through Ankara - Eskisehir- Kutahya-Balikesir-Izmir, which is 824 km in length. With Ankara-Izmir High Speed Train Project, new double track high seed line with signalling, electrification and communication systems will be constructed through Polatli - Afyonkarahisar. Project preparation and design studies have been completed.**

Rationale and Objectives: **Ankara-Izmir corridor is one of the main routes of Turkey in terms of railway linking Anatolia and Aegean Sea (Izmir port). At present, there are three transportation alternatives between Izmir and Ankara: planes, state highway and single-track railway.**

The existing Ankara -Izmir line is mostly single track and goes through Eskisehir, Kutahya and Balikesir. Considering existing railway, since geometric standards and physical condition are low, superstructure is worn-out and operation is on single line, it is impossible to reach high speed. Low speeds, old infrastructure and travel time between Ankara – Izmir of around 15-16 hours compared to the travel time of 8 hours on the state highway explain the disadvantages of the existing single track railway compared to the highway.

High speed railway line geometric standards dictate the need for a new alignment, and double tracks. Construction of high speed railway between Ankara and Izmir will help Turkey to boost economic and regional development. This corridor, being one of the most important traffic arteries of the existing network, provides linkage between Mediterranean (Aegean Sea) and Asia. Similarly, following Ankara and East Anatolia, one can reach to Caucasia and Russia on one side and to Iran on the other, through which access to Middle Asia and Far East is possible.

The project supports the general objective of development of transport via the country's main cities and constitutes therefore a very important element of coordinated intermodal transport in Turkey.

The Turkish capital, Ankara, has a population of 3.5 million. Ankara is the main transit node

for both rail and road networks linking eastern and western Turkey. Construction of high speed railway between Izmir and Ankara will provide a time-efficient, comfortable and safe transportation opportunity. The project will make a contribution to mitigate the bottleneck situation of the long travelling time between Ankara and Izmir.

The project is carried out in order to provide a time-efficient, comfortable and safe transportation system. The major objectives of the Project are summarized below:

- **Transport time savings for passengers**
- **Improved transport safety and comfort**
- **Improved transport reliability**
- **Increased share of railway in the national transportation network**
- **Decreased traffic load on the state highway between Ankara and Izmir**
- **Minimized environmental pollution due to exhaust gases**
- **Decreased accident rates**

Expected impacts and benefits: **Travel time for the time being is around 15-16 hours and will be around 4 hours when the project is completed. The existing passenger traffic on rail will be shifted to new high speed line and existing line and will be mainly used for freight transport. Consequently more capacity will be available for freight trains. The existing line is 824 km and will decrease to 663 km in length.**

New HST line will be installed ERTMS with GSM-R systems, which will ensure interoperable rail transport with higher level of safety.

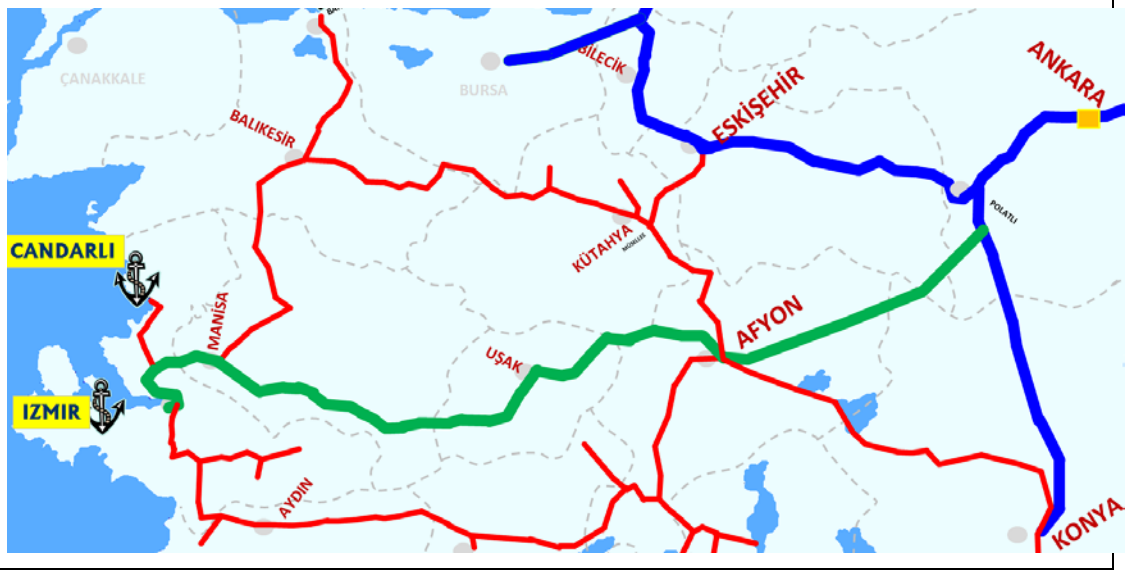
New construction of a railway line on future TEN-T railway network or in connection with existing TEN-T

The existing traffic between Ankara - Izmir is around 6 trains/day and will be 114 trains/day after the project is completed.

Contact address/details:

Section 1. Project Technical Characteristics:

355. Location (latitude/longitude or alternatively a map):



356. Start point/node/city **Ankara (Polatli)**

357. End point/node/city **Izmir**

358. AGC /AGTC Reference No. (if applicable):**C-E74**

359. Trans-Asian Railway (TAR) **YES** ☐ NO

360. Length (in km): **663**

361. Track gauge (mm):**1435**

362. No of tracks (DT=double, ST=single):**DT**

363. Loading gauge (UIC):**GC**

364. Traction **Electrified** ☐ Non-Electrified

365. Signaling type: **Automatic** ☐ Manual

366. Maximum allowed speed - passenger trains:**250**

367. Maximum allowed speed - freight trains: **65 (The capacity of the existing conventional line will mainly be dedicated to freight transport)**

368. Travel transit time pass/ freight trains(hours): **4 h / 14 h (The capacity of the existing conventional line will mainly be dedicated to freight transport)**

369. Maximum load per axle (tones): **22,5**

370. Maximum capacity (trains/day): **114**

371. Average Daily Train Traffic - Passenger trains[1]: **114**

372. Average Daily Train Traffic - Freight trains[1]: **The capacity of the existing conventional line will mainly be dedicated to freight transport.**

373. Expected (passenger) traffic increase (in % - both existing and generated): **n.a.**

374. Expected (freight) traffic increase (in % - both existing and generated) **n.a.**

375. Volume of cargo moved (tones and TEUs)[1]:

Eskişehir-Alayunt	**3 Million tones**
Alayunt - Balikesir	**2,9 Million tones**
Alayunt-Afyonkarahisar	**3.9 Million tones**
Afyonkarahisar - Dumlupinar	**1 Million tones**
Basmane - Halkapinar	**0,05 Million tones**
Halkapinar-Cigli	**0,09 Million tones**
Basmane - Sirinyer	**0,06 Million tones**
Dumlupinar-Alasehir	**0,9 Million tones**
Alasehir-Manisa	**0,8 Million tones**

Manisa-Soma	**0,5 Million tones**
Soma-Balikesir	**0,3 Million tones**
Cigli-Manisa	**0,4 Million tones**

376. Current Bottleneck/Missing Links: **Line Capacity**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES NO ■ , IF YES, □ EASE PROCEED:**

377. Is the project serving international connectivity? ■ YES □ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

378. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** □ NO

If **yes** the project is providing solution:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

379. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ **YES** □ NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

380. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links?

■ **YES** □ NO

If **yes,** the project contributes to the above:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

381. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** □ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2016),** C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

382. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ■ YES ☐ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

383. Project cost (in million$): **2350 million $**

384. Out of which fixed investments: **National Budget**

385. Expected Starting Date: **2010**

386. Expected Completion Date: **2015**

387. IRR: **7,73% financial, 29,14 % economic**

388. Project's stage: ☐ Construction ■ **Tendering** ☐ Study/Design ☐ Planning ☐ Identification

389. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **100%**
b. Foreign aid:…
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

390. Foreign cooperation sough ☐ YES ■ **NO**

If yes, please describe…… **n.a.**…….

391. Expenses made so far (2010), as a percentage of the project's total cost: … **n.a.**

392. Percentage of budget of public works allocated: **n.a.**

393. GDP (year 2010 in million $): **736**…

394. Implementation arrangements… **n.a.**……

395. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

396. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…… **n.a.**

397. Reasons for which project implementation has been delayed, (if applicable) **n.a.**

398. Any relevant Documentation?

Pre-feasibility study…….. ■

Feasibility study…….. ■

Technical Studies (Design etc)…… ☐

Other……

399. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Eskisehir - Kutahya - Balikesir Signalling & Telecommunication Project**

Project ID:

Project Description: **The infrastructure consisting of 318 km single track will be upgraded wherever needed. The line section will be signalled (ERTMS) for higher operational speed and higher line capacity. Additionally construction of buildings and procurement of railway equipments will be realized for signalling systems along with communication systems and necessary service buildings according to Relevant EN and UIC Codes.**

The new signaling and telecommunication systems will be realized during the years of 2011 – 2015. Within the scope of electrification project; new electrification system will be installed along the route during the years of 2012 – 2016.

Rationale and Objectives: **The existing line section is equipped with mechanical systems located at station entrances on both sides for traffic management, which are controlled by station masters according to orders of dispatcher; the existing situation hinders dense rail traffic flow due to capacity shortage. The existing traffic system lets trains follow each other with headway of station-by-station. Some stations are closed due to lack of staff at stations.**

The rail section Eskisehir – Balikesir is located in the middle-western area of Turkey. The line section of Eskisehir – Kutahya – Balikesir consists of single track with outdated communication system. The project also installs electrification system on the line section, increasing operational speed and traction power and decreasing travel time and gas emissions. The line section serves both freight and passenger traffic.

Therefore the whole line section consisting 318 km single track will be signaled and its infrastructure will be upgraded for higher operational speed and higher line capacity. The railway line has potential passenger and freight traffic nevertheless poor characteristics of the line prevents efficient rail transport. The establishment of signaling systems and upgrading the rail infrastructure shall increase line capacity and capability that transport of commercial and agricultural goods as well as passenger will be provided faster.

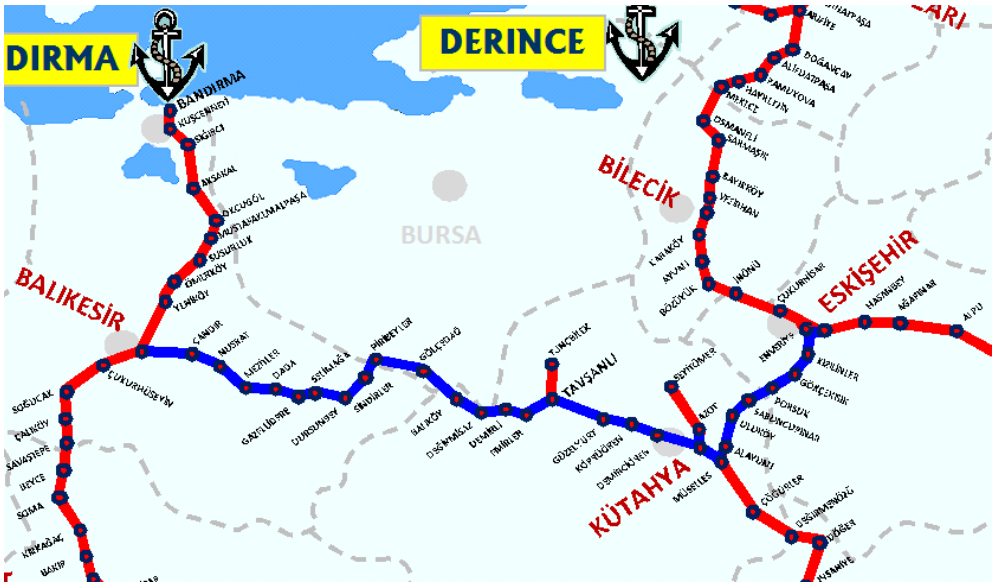
Expected impacts and benefits:

- **Line capacity will be increased with higher level of safety, efficiency of rail transport will be ensured with automatic signaling system, Closed stations will be opened.**
- **The signaling system will shorten headway, increase operational speed and line capacity.**
- **Signaling system will provide staff and time saving compared to existing system, such case will ensure cost saving for actors in railways.**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**
- **Improvement in domestic and international safer rail transport capacity for domestic and transit traffic East-West Direction.**
- **Uninterrupted rail connection with high capacity due to signaling system.**
- **High capacity, safer and faster rail transport will be available.**

Contact address/details:

Section 1. Project Technical Characteristics:

400. Location (latitude/longitude or alternatively a map):



401. Start point/node/city **Eskisehir**

402. End point/node/city **Balikesir**

403. AGC /AGTC Reference No. (if applicable):**C-E74**

404. Trans-Asian Railway (TAR)[■] **YES**[ ] NO

405. Length (in km): **318**

406. Track gauge (mm):**1435**

407. No of tracks (DT=double, ST=single):**ST**

408. Loading gauge (UIC): **GA**

409. Traction ■ **Electrified** ☐ Non-Electrified

410. Signaling type ■ **Automatic** ☐ Manual

411. Maximum allowed speed - passenger trains: **120**

412. Maximum allowed speed - freight trains: **65**

413. Travel transit time pass/ freight trains(hours): **for the time being 6,5 h; 4 h. after project/ for the time being 8 h; 7 h. after project/**

414. Maximum load per axle (tones): **22,5 / 20**

415. Maximum capacity (trains/day): **Eskisehir - Alayunt 55 Trains/Day**

Alayunt – Tavsanli 45 Trains/Day

Tavsanli – Balikesir 45 Trains/Day

Eskisehir – Balikesir 45 Trains/Day

416. Average Daily Train Traffic - Passenger trains[1]: **31 trains/day**

417. Average Daily Train Traffic - Freight trains[1]: **14 trains/day**

418. Expected (passenger) traffic increase (in % - both existing and generated): **25-30%**

419. Expected (freight) traffic increase (in % - both existing and generated) **25-30%**

420. Volume of cargo moved (tones and TEUs)[1]:

Eskişehir-Alayunt 3,0 Million Tones

Alayunt-Balıkesir 2.9 Million Tones

421. Current Bottleneck/Missing Links: **Line capacity, closed stations**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES NO ■ , IF YES ☐ LEASE PROCEED:**

422. Is the project serving international connectivity? ■ **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, **C: Somewhat improve connectivity**, D: Slightly improve connectivity, E: Does not improve connectivity.

423. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, **C: Somewhat**, D: Slightly, E: Does not

424. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets? [redacted]YES ☐O

If **yes** the project is providing connection:

A: Greatly, B: Significantly, **C: Somewhat**, D: Slightly, E: Does not

425. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills m[redacted]ng links? ☐ **YES** NO

If **yes,** the project contributes to the above:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

426. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? [redacted] **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

427. Will the project potentially create n[redacted]gative environmental or social impacts (pollution, safety, etc)? ☐ YES [redacted] **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

428. Project cost (in million$): **110 million €(rehabilitation+signaling) +70 million €(electrification)**

429. Out of which fixed investments: **National Budget and Bank Loan**

430. Expected Starting Date: **2011**

431. Expected Completion Date: **2015**

432. IRR:**2%**

433. Project's stage: [redacted] **Construction** ☐ Tendering ☐ Study/Design ☐ Planning ☐ Identification

434. Expected Funding Sources (and the % of funding for each one):

a. National Funds:
b. Foreign aid:…
c. Bank loans:

d. Grants: …

e. Private Funds (PPP basis). Please provide details……..…..

f. Other….

435. Foreign cooperation sough☐ YES ■ **NO**

If yes, please describe…**n.a.**…….

436. Expenses made so far (2010), as a percentage of the project's total cost: **n.a.**….

437. Percentage of budget of public works allocated: …**100%**……

438. GDP (year 2010 in million $): …**736**…..

439. Implementation arrangements… **n.a.** ……

440. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

441. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)… **n.a.**

442. Reasons for which project implementation has been delayed, (if applicable) **n.a.**

443. Any relevant Documentation?

Pre-feasibility study……... ■

Feasibility study……... ■

Technical Studies (Design etc)…… ■

Other……

444. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Samsun - Kalin Modernization Project**

Project ID:

Project Description: **Samsun-Kalin Railway Line constitutes one of the hinterland connections between Black Sea and inner Anatolia along the north-south direction. Samsun Port is located on one end of the line section at Black Sea coast, which had performed freight handling of 1.5 Million Tonnes in 2009. On the other end of the line section, there exists signalled and electrified line extending to the west (Kayseri, Ankara) and south Anatolia (Mersin and Iskenderun Ports) including high speed railway line of Istanbul – Ankara – Sivas, which is under construction.**

Initially Technical Assistance Project will be realized to facilitate the modernisation of the existing railway infrastructure between Samsun and Kalin via preparation of a Feasibility Study (FS), Cost Benefit Analysis (CBA), Environmental Impact Assessment (EIA), Major Project Application Forms (MPAF), design and Tender Dossiers (TD) and Terms of Reference (ToR) for supervision of works construction according to FIDIC Yellow Book. After completion of TA project, according to outputs of feasibility study, scope of works will be defined and implementation of the project will be realized

Rationale and Objectives: **The overall objective of the project to improve the railway infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by the modernisation of the existing railway line Samsun-Kalin, establishing Signalling & Telecommunications & Electrification systems, expanding the Stations.**

The existing line section is equipped with mechanical systems located at station entrances on both sides for traffic management, which are controlled by station masters according to orders of dispatcher; the existing situation hinders dense rail traffic flow due to capacity shortage. The existing traffic system lets trains follow each other with headway of station-by-station. Some stations are closed due to lack of staff at stations.

Therefore the whole line section consisting 382,5 km single track will be signaled, electrified and its infrastructure will be upgraded for higher operational speed and higher line capacity. The railway line has potential passenger and freight traffic nevertheless poor characteristics of the line prevents efficient rail transport. The establishment of signaling systems and upgrading the rail infrastructure shall increase line capacity and capability that transport of

commercial and agricultural goods as well as passenger will be provided faster.

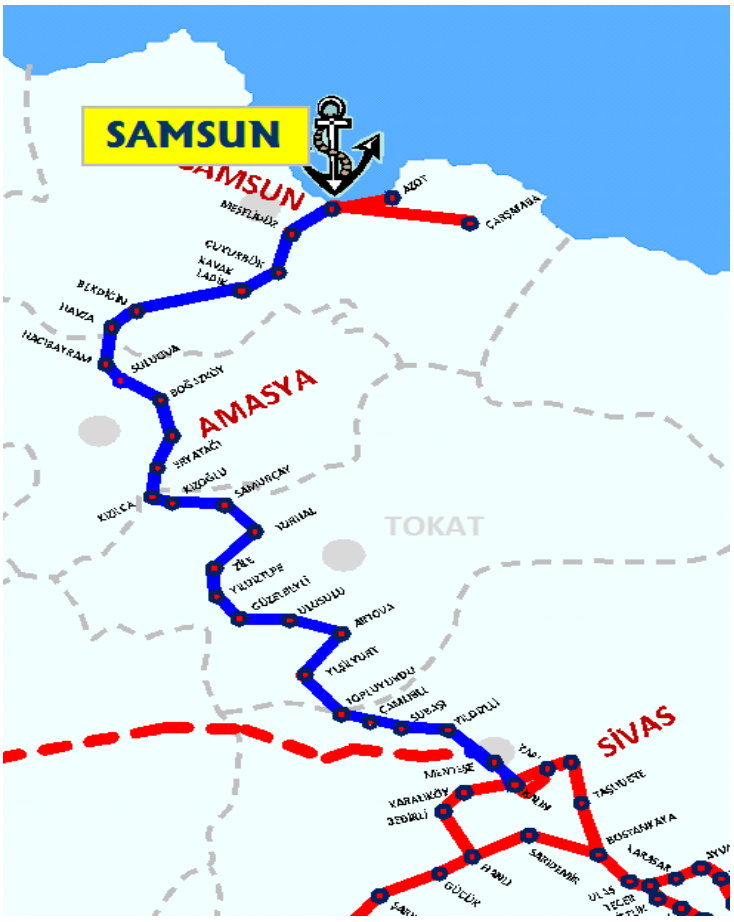
Expected impacts and benefits:

- **Line capacity will be increased with higher level of safety, efficiency of rail transport will be ensured with automatic signaling system, closed stations will be opened.**
- **The signaling system will shorten headway, increase operational speed and line capacity.**
- **Signaling system will provide staff and time saving compared to existing system, such case will ensure cost saving for actors in railways.**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**
- **Improvement in domestic and international safer rail transport capacity for domestic and transit traffic North-South Direction with Samsun port connection.**
- **Uninterrupted rail connection with high capacity due to signaling system.**
- **High capacity, safer and faster rail transport will be available.**

Contact address/details:

Section 1. Project Technical Characteristics:

445. Location (latitude/longitude or alternatively a map):



446. Start point/node/city **Samsun**

447. End point/node/city **Kalin (Sivas)**

448. AGC /AGTC Reference No. (if applicable):**C-E97**

449. Trans-Asian Railway (TAR) [■] **YE**[ ] NO

450. Length (in km): **382,5**

451. Track gauge (mm):**1435**

452. No of tracks (DT=double, ST=single):**ST**

453. Loading gauge (UIC):**GA**

454. Tractio[■] **Electrified**[ ] Non-Electrified

455. Signaling type[■] **Automatic**[ ] Manual

456. Maximum allowed speed - passenger trains: **for the time being 90 and will be 120 after project**

457. Maximum allowed speed - freight trains: **65**

458. Travel transit time pass/ freight trains(hours): **for the time being 8 h; 5 h. after project/ for the time being 10 h; 8,5 h. after project**

459. Maximum load per axle (tones): **for the time being 20 and will be 22,5 after project**

460. Maximum capacity (trains/day):**for the time being 18 trains/day**

461. Average Daily Train Traffic - Passenger trains[1]: **for the time being 8**

462. Average Daily Train Traffic - Freight trains[1]: **for the time being 23**

463. Expected (passenger) traffic increase (in % - both existing and generated):**25-30%**

464. Expected (freight) traffic increase (in % - both existing and generated) **25-30%**

465. Volume of cargo moved (tones and TEUs)[1]:**2,61 Million Tones**

466. Current Bottleneck/Missing Links: **Line capacity, closed stations**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES** **NO** [■] **, IF YES**[ ] **LEASE PROCEED:**

467. Is the project serving international connectivity? [■] **YES** [ ] NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

468. Will the project promote solutions to the particular transit transport needs of the landlocked countries? [■] YES [ ] NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, **C: Somewhat**, D: Slightly, E: Does not

469. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ YES ☐ NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

470. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or ■ missing links? **YES** NO

If **yes,** the project contributes to the above:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

471. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: **considered very urgent (for implementation up to 2016),** C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

472. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

473. Project cost (in million$): **around 136 Million €**

474. Out of which fixed investments: **n.a.**

475. Expected Starting Date: **Technical Assistance Project 2012;Construction 2013**

476. Expected Completion Date: **Technical Assistance Project 2013; Construction 2016**

477. IRR: **n.a.**

478. Project's stage: ☐ Construction ☐ Tendering ■ **Study/Design**

☐ Planning ☐ Identification

479. Expected Funding Sources (and the % of funding for each one):

a. National Funds: …**15%**

b. Foreign aid:…**85% (EU Funds)**

c. Bank loans: …

d. Grants: …

e. Private Funds (PPP basis). Please provide details……..…..

f. Other….

480. Foreign cooperation sough☐ YES ■ **NO**

If yes, please describe…**n.a.**…….

481. Expenses made so far (2010), as a percentage of the project's total cost: **n.a.**……..

482. Percentage of budget of public works allocated: **n.a.**……

483. GDP (year 2010 in million $): …**736**…..

484. Implementation arrangements……**n.a.**……

485. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders**

486. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…**n.a.**

487. Reasons for which project implementation has been delayed, (if applicable)**n.a.**.

488. Any relevant Documentation?

Pre-feasibility study……..☐

Feasibility study……..☐

Technical Studies (Design etc)……☐

Other……

489. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Malatya - Narli Modernization Project**

Project ID:

Project Description: **Malatya -Narli line section stays in south-eastern Anatolia and forms a hinterland connection as part of a north-south connection between Black Sea, Eastern Anatolia regions and Mediterranean Sea region. Malatya is 195 km away from High Speed Line in Sivas, which is under construction between Sivas and Ankara. Between Sivas and Malatya, there is a High Speed Line Project, which is planned to be constructed by 2023 and shall extend from Sivas to Diyarbakir via Malatya.**

Malatya – Narli railway line is 198 (including 16 km side tracks) km in length and single-track with signalling and electrification systems. This line section particularly serves to heavy-haul freight transport, which was about 1.214 Million Ton-km in 2009. There are approximately 14 stations along the line. The train operation on the railway line is based on the TSİ System. That means that the train traffic is administrated by dispatchers in control centre via electronic signalling system. The traffic remote control centre and electrification tele-command centre of this railway line is located in Malatya. The turnouts at stations are remote-controlled by points-machines. There are track vacancy detection systems installed on the railway line for signalling system.

Initially Technical Assistance Project will be realized to facilitate the modernisation of the existing railway infrastructure between Samsun and Kalin via preparation of a Feasibility Study (FS), Cost Benefit Analysis (CBA), Environmental Impact Assessment (EIA), Major Project Application Forms (MPAF), design and Tender Dossiers (TD) and Terms of Reference (ToR) for supervision of works construction according to FIDIC Yellow Book. After completion of TA project, according to outputs of feasibility study, scope of works will be defined and implementation of the project will be realized.

Rationale and Objectives: **The overall objective of the project to improve the railway infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by the modernisation of the existing railway line Malatya-Narli, upgrading Signalling, Telecommunications & Electrification systems, expanding the Stations.**

The existing line section is equipped with signaling, telecommunication and electrification systems, which are remote-controlled from the control center in Malatya; the existing

situation hinders dense rail traffic flow due to capacity shortage. The existing traffic system is not interoperable.

Therefore the whole line section consisting 198 km single track will be upgraded with new signaling, electrification systems along with its infrastructure (including track doubling) for higher operational speed and higher line capacity according to outputs of TA Project.

The railway line has potential passenger and freight traffic nevertheless poor characteristics of the line prevents efficient rail transport. The upgrading of existing systems and the rail infrastructure shall increase line capacity and capability that transport of commercial and agricultural goods as well as passenger will be provided faster.

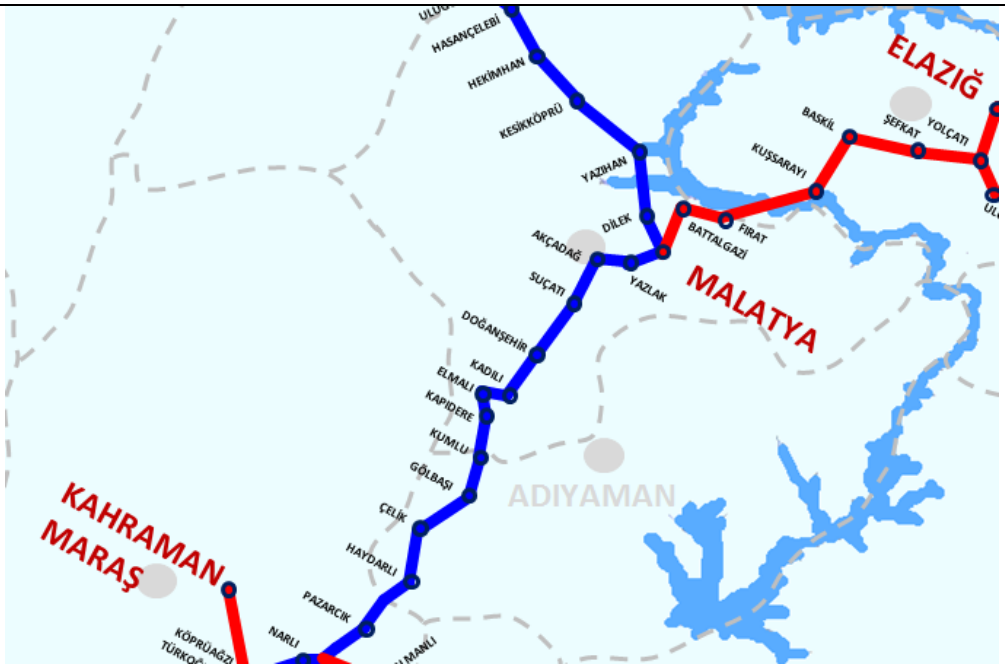
Expected impacts and benefits:

- **Line capacity will be increased with higher level of safety, efficiency of rail transport will be ensured with automatic signaling system.**
- **The new signaling system will increase operational speed and line capacity.**
- **Signaling system will provide staff and time saving compared to existing system, such case will ensure cost saving for actors in railways.**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**
- **Improvement in domestic and international safer rail transport capacity for domestic and transit traffic North-South Direction.**
- **Uninterrupted rail connection with high capacity due to interoperable signaling system.**

Contact address/details:

Section 1. Project Technical Characteristics:

490. Location (latitude/longitude or alternatively a map):



491. Start point/node/city **Malatya**

492. End point/node/city **Narli**

493. AGC /AGTC Reference No. (if applicable):**C-E70**

494. Trans-Asian Railway (TAR) [■] **YES** [ ] NO

495. Length (in km): **198**

496. Track gauge (mm):**1435**

497. No of tracks (DT=double, ST=single):**ST**

498. Loading gauge (UIC):**GA**

499. Traction [■] **Electrified** [ ] Non-Electrified

500. Signaling type [■] **Automatic** [ ] Manual

501. Maximum allowed speed - passenger trains:**120**

502. Maximum allowed speed - freight trains:**65**

503. Travel transit time pass/ freight trains(hours): **for the time being 3,5 h; 2,5 h. after project/ for the time being 4 h; 3,5 h. after project/**

504. Maximum load per axle (tones): **for the time being 20 and will be 22,5 after project**

505. Maximum capacity (trains/day): **for the time being 34**

506. Average Daily Train Traffic - Passenger trains[1]: **for the time being ~5**

507. Average Daily Train Traffic - Freight trains[1]: **for the time being 30**

508. Expected (passenger) traffic increase (in % - both existing and generated):**25-30%**

509. Expected (freight) traffic increase (in % - both existing and generated) **25-30%**

510. Volume of cargo moved (tones and TEUs)[1]:**4,9 Million Tones**

511. Current Bottleneck/Missing Links: **Line Capacity**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES NO ■ , IF YES PLEASE PROCEED:**

512. Is the project serving international connectivity? ■ **YES** NO

If **yes** is it expected to:

A: Greatly improve connectivity, **B: Significantly improve connectivity**, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

513. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** NO

If **yes** the project is providing solution:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

514. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ **YES** NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

515. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or ■ missing links? **YES** NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, **C: Somewhat,** D: Slightly, E: Does not

516. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), **C: considered urgent (for implementation up to 2020),** D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

517. Will the project potentially create ■ egative environmental or social impacts (pollution, safety, etc)? YES **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great

impact.

Project Financial Information

518. Project cost (in million$): **n.a.**

519. Out of which fixed investments: **n.a.**

520. Expected Starting Date: **Technical Assistance Project 2013;Construction 2014**

521. Expected Completion Date: **Technical Assistance Project 2014; Construction 2017**

522. IRR: **n.a.**

523. Project's stage: ☐ Construction ☐ Tendering ■ **Study/Design**

☐ Planning ☐ Identification

524. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **15%**...

b. Foreign aid:**85% (EU Funds)**...

c. Bank loans: ...

d. Grants: ...

e. Private Funds (PPP basis). Please provide details……..…...

f. Other….

525. Foreign cooperation sought ☐ YES ■ NO

If yes, please describe…… **n.a.** ……

526. Expenses made so far (2010), as a percentage of the project's total cost: ... **n.a.**

527. Percentage of budget of public works allocated: **n.a.** ……

528. GDP (year 2010 in million $): **736**……..

529. Implementation arrangements... **n.a.**……

530. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders**

531. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)... **n.a.**

532. Reasons for which project implementation has been delayed, (if applicable)…..

533. Any relevant Documentation?

Pre-feasibility study……... ☐

Feasibility study……... ☐

Technical Studies (Design etc)…… ☐

Other……

534. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Lake Van New Ferry Procurement (Northern Pass Project)**

Project ID: **n.a.**

Project Description: **Elazig - Kapikoy Railway Line constitutes one of the international connections along east-west direction, which had performed freight handling of around 0,8-1 Million Tonnes in 2010. Lake Van is located on this line section. For the time being, there is a ferry service on both sides of the lake to ensure transport of freight on Lake Van**

Rail ferries operate between Tatvan and Van over Lake Van. There are 4 ferries operating, each has a capacity of 8-12 wagons and maximum loading of 400 tonnes. Availability of ferries 50% that only 2 ferries are in service in average. The average travel time including loading/unloading is about 6 hours. It is planned to procure 2 new ferries with totally 100 wagon-capacities in order to provide faster and more efficient transport of wagons and increase the traffic capacity over Lake Van. Moreover, besides the procurement of new ferries, existing piers are to be repaired and developed for higher capacity and also new repair - maintenance facility for ferries will be established as well.

In the long run, it is planned to construct a new railway line, which will by-pass Lake Van in order to eliminate the bottleneck due to ferry link. Design and feasibility studies over alternative routes are going on.

Rationale and Objectives: **The overall objective of the project to improve the infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by procurement of new ferries and upgrading existing piers.**

Expected impacts and benefits:

- **Increase in operational speed and line capacity on Lake Van.**
- **Fuel, staff and time saving compared to existing situation such case will ensure cost saving for actors in railways.**
- **Improvement in domestic and international safer rail transport capacity for domestic and transit traffic East-West Direction to/from Iran and Asia.**

Contact address/details:

Section 1. Project Technical Characteristics:

535. Location (latitude/longitude or alternatively a map):

536. Start point/node/city **Tatvan**

537. End point/node/city **Van**

538. AGC /AGTC Reference No. (if applicable):**C-E7O**

539. Trans-Asian Railway (TAR) **YE** NO

540. Length (in km): **50 miles**

541. Track gauge (mm):**1435**

542. No of tracks (DT=double, ST=single):**n.a.**

543. Loading gauge (UIC):**GA-GB**

544. Tractio Electrifie Non-Electrified

545. Signaling type Automatic Manual

546. Maximum allowed speed - passenger trains: **n.a.**

547. Maximum allowed speed - freight trains: **n.a.**

548. Travel transit time pass/ freight trains(hours): **for the time being 6 and will be around 3-4 hours after project**

549. Maximum load per axle (tones): **n.a.**

550. Maximum capacity (trains/day): **for the time being 90 wagons/day and will be around 800 wagons/day after project**

551. Average Daily Train Traffic - Passenger trains[1]:**for the time being 4**

552. Average Daily Train Traffic - Freight trains[1]: **for the time being 6**

553. Expected (passenger) traffic increase (in % - both existing and generated):**n.a.**

554. Expected (freight) traffic increase (in % - both existing and generated) **n.a.**

555. Volume of cargo moved (tones and TEUs)[1]: **1 Million Tones**

556. Current Bottleneck/Missing Links: **Line capacity, lack of rail link**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES** **NO** ☐ **, IF YES PLEASE PROCEED:**

557. Is the project serving international connectivity? ☐ **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

558. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ☐ YES ☐ NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

559. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

☐ **YES** ☐ NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

560. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or ☐ missing links?
YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

561. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ☐ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

562. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

563. Project cost (in million$): **60,5 Million €**

564. Out of which fixed investments: **National Budget**

565. Expected Starting Date: **2006**

566. Expected Completion Date: **2011**

567. IRR: **n.a.**

568. Project's stage: ■ **Construction** ☐ Tendering ■ Study/Design ☐ Planning ☐ Identification

569. Expected Funding Sources (and the % of funding for each one):

a. National Funds: …**100%**
b. Foreign aid:…
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

570. Foreign cooperation sought ☐ YES ■ **NO**

If yes, please describe…**n.a.**…….

571. Expenses made so far (2010), as a percentage of the project's total cost: **31%**….

572. Percentage of budget of public works allocated: **100%**

573. GDP (year 2010 in million $): …**736**…..

574. Implementation arrangements……**n.a.**……

575. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders**

576. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…na

577. Reasons for which project implementation has been delayed, (if applicable)na.

578. Any relevant Documentation?

Pre-feasibility study……. ☐

Feasibility study……. ☐

Technical Studies (Design etc)..... ☐

Other.....

579. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I/II – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Georgia, Azerbaijan, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))

ECO ROUTE NUMBER: RAIL ROUTE IV-Turkey via Azerbaijan, Caspian sea to Kazakhstan (Istanbul to Shcherbakty -Russian Borders)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Arifiye-Eskisehir-Ankara-Kirikkale-Yerkoy-Sivas (new alignment via Yozgat)-Cetinkaya-Kars-Mezra-missing link: Aktas-border with Georgia-gauge change to 1536mm (non ECO country: [missing link: Border with Turkey-Ahalkalaki]-route in Georgia through Tbilisi- border with Azerbaijan)

Project Name: **Kayas – Cetinkaya Electrification Project**

Project ID:

Project Description: **The rail section Kayas – Cetinkaya is located in the middle area of Turkey, constituting east-west corridor. The whole rail section is single track with signalling and telecommunication systems. Kayas – Cetinkaya Railway line is one of the important routes where dense transportation is performed. Every investment to be performed on this line will return increasingly. The existing line section will be electrified.**

The infrastructure consisting of around 702 km single track will be upgraded wherever needed and station loops are to be extended for operation of longer trains. The line section will be electrified for higher operational speed and higher line capacity according to Relevant EN and UIC Codes.

Rationale and Objectives: **Kayas – Cetinkaya railway line is 702 km in length and single-track with signalling and telecommunication systems. This line section particularly serves to heavy-haul freight transport, which was in 2010 as follows;**

Kayas-Irmak	**2.8 Million Tones**
Irmak-Bogazkopru	**3.6 Million Tones**

Bogazkopru-Kayseri	**4.8 Million Tones**
Hanli-Kayseri	**1.6 Million Tones**
Bostankaya-Cetinkaya	**3.5 Million Tones**
Hanli-Bostankaya	**0,8 Million Tones**

The train operation on the railway line is based on the TSI System. That means that the train traffic is administrated by dispatchers in control centre via electronic signalling system. The turnouts at stations are remote-controlled by points-machines. There are track vacancy detection systems installed on the railway line for signalling system.

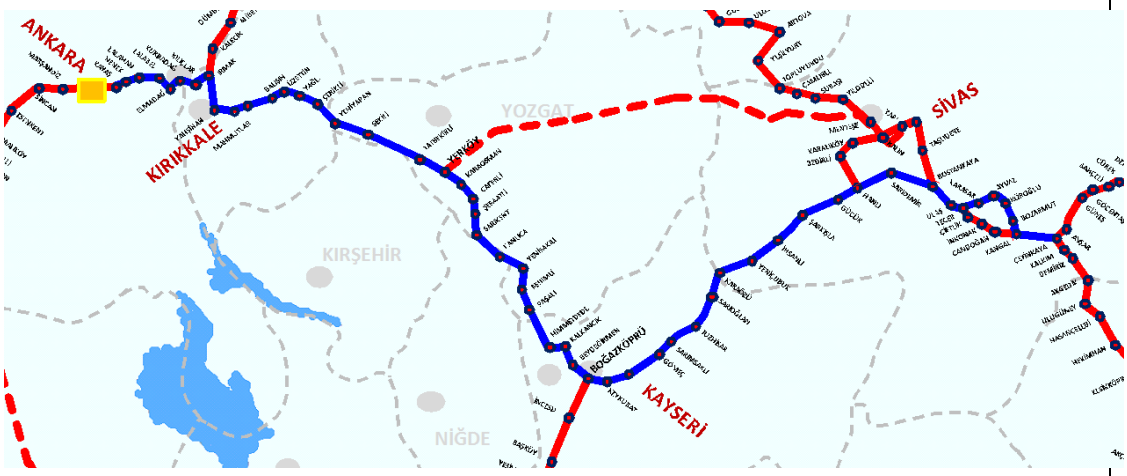
Expected impacts and benefits:

- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**
- **Reduced locomotive operating costs because of the use of electric locomotives**
- **Improved locomotive carrying capacity leading to greater train loads**
- **Improved passenger journey times**
- **Attraction of new passenger and freight traffic due to reduced journey times, and**
- **anticipated lower freight tariffs due to reduced operating costs**

Contact address/details:

Section 1. Project Technical Characteristics:

580. Location (latitude/longitude or alternatively a map):



581. Start point/node/city: **Ankara (Kayas)**

582. End point/node/city : **Cetinkaya**

583. AGC /AGTC Reference No. (if applicable): **C-E70**

584. Trans-Asian Railway (TAR): **YES** ☐ NO

585. Length (in km): **702**

586. Track gauge (mm):**1435**

587. No of tracks (DT=double, ST=single):**ST**

588. Loading gauge (UIC):**GA**

589. Tractio[redacted] **Electrified** ☐ Non-Electrified

590. Signaling type[redacted] **Automatic** ☐ Manual

591. Maximum allowed speed - passenger trains: **120**

592. Maximum allowed speed - freight trains: **65**

593. Travel transit time pass/ freight trains (hours): **for the time being 9 h. 23 m.; estimated 8 h. 15 m. after project completion/ for the time being 13,5 h.; estimated 13 h. after project completion**

594. Maximum load per axle (tones): **20**

595. Maximum capacity (trains/day): **24-44**

596. Average Daily Train Traffic - Passenger trains[1]:**10**

597. Average Daily Train Traffic - Freight trains[1]: **10**

598. Expected (passenger) traffic increase (in % - both existing and generated):**25-30%**

599. Expected (freight) traffic increase (in % - both existing and generated)**25-30%**

600. Volume of cargo moved (tones and TEUs)[1]:

Kayas-Irmak	**2.8 Million Tones**
Irmak-Bogazkopru	**3.6 Million Tones**
Bogazkopru-Kayseri	**4.8 Million Tones**
Hanli-Kayseri	**1.6 Million Tones**
Bostankaya-Cetinkaya	**3.5 Million Tones**
Hanli-Bostankaya	**0,8 Million Tones**

601. Current Bottleneck/Missing Links: **Line Capacity**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES** **N[redacted], IF YES PLEASE PROCEED:**

602. Is the project serving international connectivity? [redacted] **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

603. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, **B: Significantly,** C: Somewhat, D: Slightly, E: Does not

604. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ **YES** ☐ NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

605. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or fills missing links?

■ **YES** ☐ NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

606. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2016),** C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

607. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

608. Project cost (in million$): **88 million €**

609. Out of which fixed investments: **National Budget and Bank Loan**

610. Expected Starting Date: **2011**

611. Expected Completion Date: **2015**

612. IRR: **n,a**

613. Project's stage: ☐ Construction ☐ Tendering ■ **Study/Design**
☐ Planning ☐ Identification

614. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **n.a.**
b. Foreign aid:…
c. Bank loans: **n.a.**
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

615. Foreign cooperation sough ☐ YES ■ **NO**

If yes, please describe…….

616. Expenses made so far (2010), as a percentage of the project's total cost: **n.a.**

617. Percentage of budget of public works allocated: **n.a.**

618. GDP (year 2010 in million $): **736**

619. Implementation arrangements……

620. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

621. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)…… **n.a.**

622. Reasons for which project implementation has been delayed, (if applicable) **n.a.**

623. Any relevant Documentation?

Pre-feasibility study…….. ☐

Feasibility study…….. ☐

Technical Studies (Design etc)…… ☐

Other… ……

624. Other project-related information?.....

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Pehlivankoy - Uzunkopru –Border with Greece Modernization Project**

Project ID:

Project Description:

The existing line section is equipped with mechanical systems for traffic management, which hinders dense rail traffic flow due to capacity shortage. The existing traffic system lets trains follow each other with station-by-station. Moreover poor characteristics of existing infrastructure allow lower operational speed. Therefore the whole line section consisting of 30 km single track will be signalled and its infrastructure will be upgraded for higher operational speed and higher line capacity.

The infrastructure shall be upgraded and the whole line section will be signalled and electrified along with communication systems according to Relevant EN and UIC Codes.

Rationale and Objectives:

The railway line has potential passenger and dense freight international traffic nevertheless poor characteristic of the line prevents efficient rail transport as an alternative of rail connection to Europe via Bulgaria. The establishment of signalling and electrification systems and upgrading infrastructure shall increase line capacity and capability that transport of commercial and agricultural goods as well as passenger will be provided faster and efficiently to/from Europe via Greece.

The overall objective of the project to improve the railway infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by the modernisation of the existing railway line, installing Signalling & Telecommunications & Electrification systems.

Expected impacts and benefits:

- **Line capacity will be increased with higher level of safety, efficiency of rail transport will be ensured with automatic signaling system.**
- **The new signaling system will increase operational speed and line capacity.**
- **Signaling system will provide staff and time saving compared to existing system, such case will ensure cost saving for actors in railways.**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**
- **Improvement in domestic and international safer rail transport capacity for domestic and transit traffic North-South Direction.**
- **Uninterrupted rail connection with high capacity due to interoperable signaling system.**

Contact address/details:

Section 1. Project Technical Characteristics:

625. Location (latitude/longitude or alternatively a map):

626. Start point/node/city **Border with Greece**

627. End point/node/city **Pehlivankoy**

628. AGC /AGTC Reference No. (if applicable):**C-E70-2**

629. Trans-Asian Railway (TAR) ☐ YE■ **NO**

630. Length (in km): **30**

631. Track gauge (mm):**1435**

632. No of tracks (DT=double, ST=single):**ST**

633. Loading gauge (UIC):**GA**

634. Traction [redacted] **Electrified** ☐ Non-Electrified

635. Signaling type [redacted] **Automatic** ☐ Manual

636. Maximum allowed speed - passenger trains: **for the time being 90; will be 120 after project completion**

637. Maximum allowed speed - freight trains: **65**

638. Travel transit time pass/ freight trains(hours): **25 m./ 40 m.**

639. Maximum load per axle (tones): **for the time being 20 and will be 22,5 after project**

640. Maximum capacity (trains/day): **for the time being 40**

641. Average Daily Train Traffic - Passenger trains[1]: **8**

642. Average Daily Train Traffic - Freight trains[1]: **12**

643. Expected (passenger) traffic increase (in % - both existing and generated): **25-30%**

644. Expected (freight) traffic increase (in % - both existing and generated) **25-30%**

645. Volume of cargo moved (tones and TEUs)[1]: **36,000 Tones**

646. Current Bottleneck/Missing Links: **Line Capacity**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES** **NO** [redacted] **, IF YES PLEASE PROCEED:**

647. Is the project serving international connectivity? [redacted] **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, **B: Significantly improve connectivity**, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

648. Will the project promote solutions to the particular transit transport needs of the landlocked countries? [redacted] **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

649. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

[redacted] **YES** ☐ NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

650. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or [redacted] missing links?

YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, **C: Somewhat,** D: Slightly, E: Does not

651. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

652. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

653. Project cost (in million$): **12,9 Million €**

654. Out of which fixed investments: **National Budget**

655. Expected Starting Date: **2010**

656. Expected Completion Date: **2012**

657. IRR: **22,9%**

658. Project's stage: ☐ Construction ■ **Tendering** ☐ Study/Design ☐ Planning ☐ Identification

659. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **100%**...
b. Foreign aid: ...
c. Bank loans: ...
d. Grants: ...
e. Private Funds (PPP basis). Please provide details.....
f. Other....

660. Foreign cooperation sought ☐ YES ■ **NO**

If yes, please describe..... **n.a.** .....

661. Expenses made so far (2010), as a percentage of the project's total cost: ... **n.a.**

662. Percentage of budget of public works allocated: **n.a.** .....

663. GDP (year 2010 in million $): **736**……..

664. Implementation arrangements… **n.a.** ……

665. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders**

666. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)… **n.a.**

667. Reasons for which project implementation has been delayed, (if applicable)…..

668. Any relevant Documentation?

Pre-feasibility study……..

Feasibility study……..

Technical Studies (Design etc)……

Other……

669. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Bandirma-Menemen (Izmir) Modernization Project**

Project ID: **n.a.**

Project Description: **The existing line section is equipped with mechanical systems for traffic management, which hinders dense rail traffic flow due to capacity shortage. The existing traffic system lets trains follow each other with station-by-station, with control of station masters according to orders of a dispatcher at control centre. Moreover poor characteristics of existing infrastructure allow lower operational speed. Therefore the whole line section consisting of 341 km single track will be signalled, electrified and its infrastructure will be upgraded for higher operational speed and higher line capacity.**

The infrastructure shall be upgraded and the whole line section will be signalled and electrified along with communication systems according to Relevant EN and UIC Codes.

Rationale and Objectives: **The overall objective of the project to improve the railway infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by the modernisation of the existing railway line, installing Signalling & Telecommunications & Electrification systems.**

The railway line has potential passenger and dense freight traffic between Marmara Region/Inner Anatolia and Izmir Port. Nevertheless poor characteristic of the line prevents efficient rail transport. Some stations are closed due to lack of staff at stations. The establishment of signalling and electrification systems and upgrading the infrastructure will increase line capacity and capability that transport of commercial and agricultural goods as well as passengers will be provided safer, faster and efficiently.

Expected impacts and benefits:

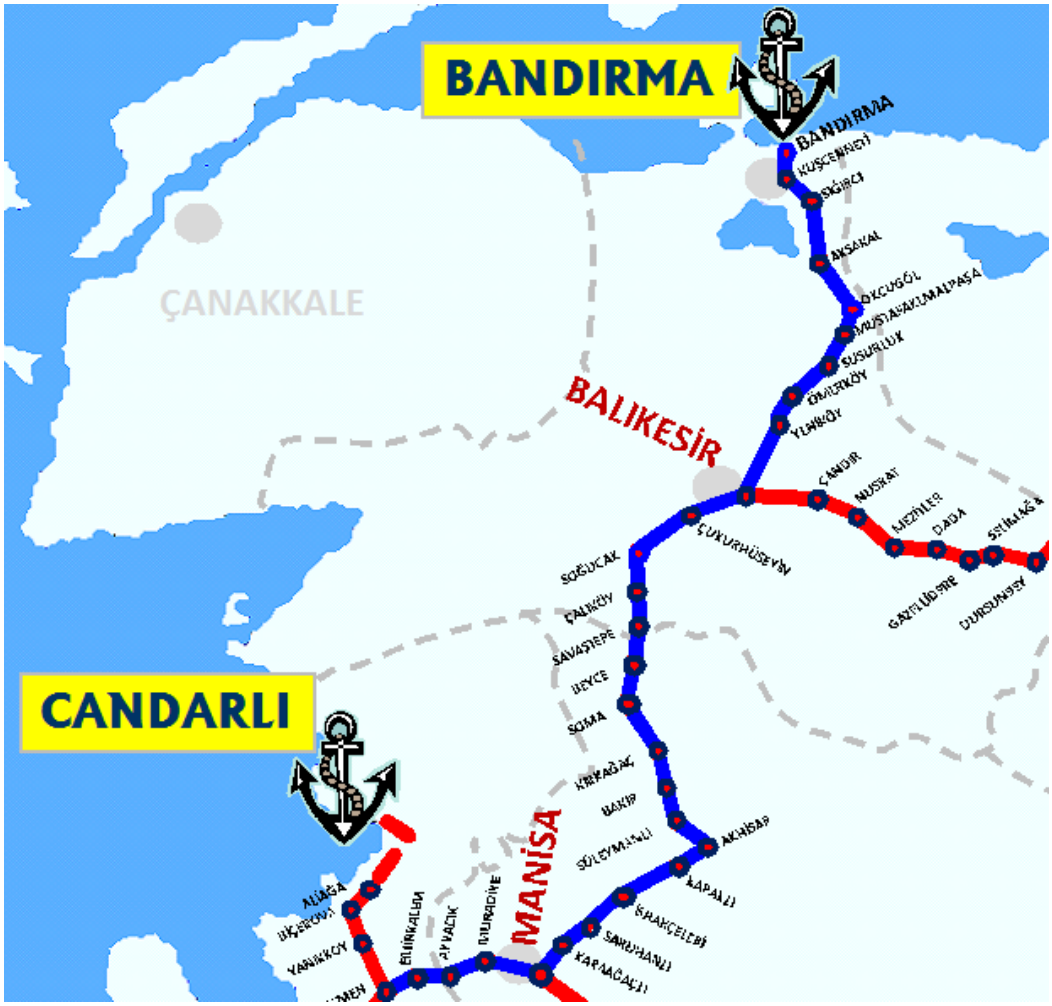
- **Line capacity will be increased with higher level of safety, efficiency of rail transport will be ensured with automatic signaling system.**
- **The new signaling system will increase operational speed and line capacity.**
- **Signaling system will provide staff and time saving compared to existing system, such case will ensure cost saving for actors in railways.**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification**

- **Improvement in domestic and international safer rail transport capacity for domestic and transit traffic North-South Direction.**
- **Uninterrupted rail connection with high capacity due to interoperable signaling system.**

Contact address/details:

Section 1. Project Technical Characteristics:

670. Location (latitude/longitude or alternatively a map):



671. Start point/node/city **Bandirma**

672. End point/node/city **Izmir (Menemen)**

673. AGC /AGTC Reference No. (if applicable): **C-E74**

674. Trans-Asian Railway (TAR) ■ **YES** ☐ NO

675. Length (in km): **341**

676. Track gauge (mm): **1435**

677. No of tracks (DT=double, ST=single): **ST**

678. Loading gauge (UIC): **GA**

679. Traction ■ **Electrified** ☐ Non-Electrified

680. Signaling type ■ **Automatic** ☐ Manual

681. Maximum allowed speed - passenger trains: **120**

682. Maximum allowed speed - freight trains: **65**

683. Travel transit time pass/ freight trains (hours): **for the time being 6 h. 40 m.; estimated 4h. after project completion/ for the time being 8 h.; estimated 7 h. after project completion/**

684. Maximum load per axle (tones): **22,5**

685. Maximum capacity (trains/day): **Bandirma – Balikesir 35 Trains/Day**

Balikesir - Manisa 40 Trains/Day

Manisa – Menemen 45 Trains/Day

686. Average Daily Train Traffic - Passenger trains[1]: **for the time being;**

Bandirma – Balikesir 4 Trains/Day

Balikesir - Manisa 12 Trains/Day

Manisa – Izmir 18 Trains/Day

687. Average Daily Train Traffic - Freight trains[1]: **for the time being;**

Bandirma – Balikesir 25 Trains/Day

Balikesir - Manisa 9 Trains/Day

Manisa – Izmir 20 Trains/Day

688. Expected (passenger) traffic increase (in % - both existing and generated):**25-30%**

689. Expected (freight) traffic increase (in % - both existing and generated) **25-30%**

690. Volume of cargo moved (tones and TEUs)[1]: **The volume of freight in 2010 was as follows; Manisa-Soma 0,4 Million Tones**

Soma-Balikesir 0,3 Million Tones

Balikesir-Bandirma 1,9 Million Tones

Cigli-Manisa 0,4 Million Tones;

The projected volume of freight is about 3,9 Million tones.

691. Current Bottleneck/Missing Links: **Line Capacity**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES NO ■ , IF YES ☐ LEASE PROCEED:**

692. Is the project serving international connectivity? ■ **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, **B: Significantly improve connectivity**, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

693. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

694. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ **YES** ☐ NO

If **yes** the project is providing connection:

A: Greatly, **B: Significantly**, C: Somewhat, D: Slightly, E: Does not

695. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or ■ missing links? **YES** NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly**, C: Somewhat,** D: Slightly, E: Does not

696. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), **B: considered very urgent (for implementation up to 2016)**, C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

697. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

698. Project cost (in million$): **104 Million €**

699. Out of which fixed investments: **National Budget & Bank Loan**

700. Expected Starting Date: **2011**

701. Expected Completion Date: **2015**

702. IRR: **20%**

703. Project's stage: ☐ Construction ☐ Tendering ■ **Study/Design**

☐ anning ☐ ntification

704. Expected Funding Sources (and the % of funding for each one):

a. National Funds: …
b. Foreign aid: …
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

705. Foreign cooperation sough☐ YES ■ **NO**

If yes, please describe…… **n.a.** ……

706. Expenses made so far (2010), as a percentage of the project's total cost: … **n.a.** ….

707. Percentage of budget of public works allocated: **n.a.** ……

708. GDP (year 2010 in million $): **736**……..

709. Implementation arrangements… **na** ……

710. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders**

711. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)… **n.a.**

712. Reasons for which project implementation has been delayed, (if applicable)…..

713. Any relevant Documentation?

Pre-feasibility study……..☐

Feasibility study……..☐

Technical Studies (Design etc)……☐

Other……

714. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

Project Name: **Kars - Aktas Railway Project**

Project ID: **n.a.**

Project Description: **The existing railway line in Kars goes to Dogukapi (Border with Armenia), which is closed to transport due to a political conflict. The new railway line, which is under construction, goes along northern direction from Kars (Mezra) to Aktas (Border with Georgia) in order to establish a new rail connection to Georgia through Ahalkalaki.**

Rationale and Objectives: **The railway line has potential passenger and dense freight international traffic between Turkey, Georgia and Azerbaijan. The project covers the route from Kars to Baku through Tbilisi, of which Kars-Aktas Railway Project forms a part. It is aimed at improving the quality and the volume of international transport services by establishing a new railway line to Georgia. The objective is to establish new modern rail connection from/to Asia and China through Caucasus (Georgia and Azerbaijan). The overall objective of the project to improve the railway infrastructure and the modal split in favour of railway sector, while increasing safety level and reducing travel time, by the construction of the new railway line with electrification, signalling and communication systems.**

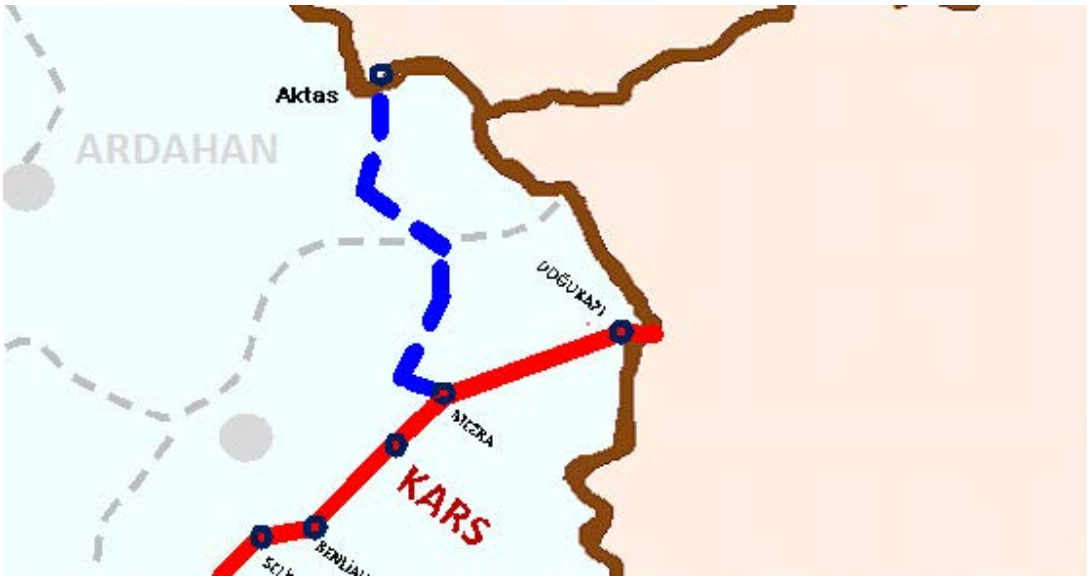
Expected impacts and benefits:

- **Improvement in domestic and international safer rail transport capacity along Europe-Asia Route,**
- **Increase in operational speed and line capacity with new signaling system,**
- **Improvement in emission and noise reduction due to efficient traffic flow and electrification,**
- **Uninterrupted rail connection with high capacity due to interoperable signaling system.**
- **An alternative to the route over Lake Van through Iran to Asia so as to overcome the capacity bottleneck in Lake Van.**

Contact address/details:

Section 1. Project Technical Characteristics:

715. Location (latitude/longitude or alternatively a map):



716. Start point/node/city **Kars (Mezra)**

717. End point/node/city **Aktas**

718. AGC /AGTC Reference No. (if applicable): **n.a.**

719. Trans-Asian Railway (TAR): ■ **YES** ☐ NO

720. Length (in km): **76**

721. Track gauge (mm):**1435**

722. No of tracks (DT=double, ST=single): **ST**

723. Loading gauge (UIC): **GA**

724. Traction: ■ **Electrified** ☐ Non-Electrified

725. Signaling type: ■ **Automatic** ☐ Manual

726. Maximum allowed speed - passenger trains: **120**

727. Maximum allowed speed - freight trains: **65**

728. Travel transit time pass/ freight trains (hours): **estimated 50 m. / 100 m.**

729. Maximum load per axle (tones): **22,5**

730. Maximum capacity (trains/day): **18**

731. Average Daily Train Traffic - Passenger trains[1]: **6**

732. Average Daily Train Traffic - Freight trains[1]: **12**

733. Expected (passenger) traffic increase (in % - both existing and generated): **n.a.**

734. Expected (freight) traffic increase (in % - both existing and generated) **n.a.**

735. Volume of cargo moved (tones and TEUs)[1]:**3 Million Tones after project completion**

736. Current Bottleneck/Missing Links: **Elimination of a missing Link Between Turkey& Georgia**

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries **YES NO ■ , IF YES PLEASE PROCEED:**

737. Is the project serving international connectivity? ■ **YES** ☐ NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

738. Will the project promote solutions to the particular transit transport needs of the landlocked countries? ■ **YES** ☐ NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

739. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

■ **YES** ☐ NO

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

740. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or ■ missing links? **YES** NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

741. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? ■ **YES** ☐ NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

742. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ☐ YES ■ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great

impact.

Project Financial Information

743. Project cost (in million$): **166 Million €**

744. Out of which fixed investments: **National Budget**

745. Expected Starting Date: **2006**

746. Expected Completion Date: **2012**

747. IRR: **9,37% financial, 16,00% economic**

748. Project's stage: **Construction** ☐ Tendering ☐ Study/Design ☐anning I☐tification

749. Expected Funding Sources (and the % of funding for each one):

a. National Funds: **100%**…
b. Foreign aid: …
c. Bank loans: …
d. Grants: …
e. Private Funds (PPP basis). Please provide details……..…..
f. Other….

750. Foreign cooperation sough YES ☐ NO

If yes, please describe: **The railway line will be connected to Baku through Tbilisi with new railway line and rehabilitation of existing lines in Georgia along the route.**

751. Expenses made so far (2010), as a percentage of the project's total cost: **n.a.**

752. Percentage of budget of public works allocated: **100%** …

753. GDP (year 2010 in million $): **736**.

754. Implementation arrangements… **n.a.**……

755. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders**

756. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable)… **n.a.**

757. Reasons for which project implementation has been delayed, (if applicable)…..

758. Any relevant Documentation?

Pre-feasibility study…….. ☐
Feasibility study……..
Technical Studies (Design etc)……..
Other……

759. Other project-related information?……

ECO ROUTE NUMBER: RAIL ROUTE I-Turkey via Iran to Pakistan (Istanbul - Islamabad)

ECO ROUTE NUMBER: RAIL ROUTE II- Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Ankara - Kayseri – Bostankaya – Malatya – Elazig - Tatvan-Ferry Lake Van (new alignment)-Van - Kapikoy-(border with Iran)

RAIL ROUTE I – BRANCHES

ECO-RAIL 1B-A/2B-A : Sivas-Samsun

ECO-RAIL 1B-B/2B-B : Malatya- Mersin

ECO-RAIL 1B-C/2B-C: Eskisehir-Izmir {there are two alternative routes: 1) through Alayunt-Afyonkarahisar-Usak-Manisa, 2)Alayunt-Balikesir-Manisa)

ECO ROUTE NUMBER: RAIL ROUTE III- Turkey via Georgia, Azerbaijan, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))

ECO ROUTE NUMBER: RAIL ROUTE IV-Turkey via Azerbaijan, Caspian sea to Kazakhstan (Istanbul to Shcherbakty -Russian Borders)

Bulgaria border-Kapikule/Greece border-Uzunkopru---Istanbul (European side)—Ferry link (tunnel under construction)-Istanbul (Asian side)- Haydarpasa/Izmit-Arifiye-Eskisehir-Ankara-Kirikkale-Yerkoy-Sivas (new alignment via Yozgat)-Cetinkaya-Kars-Mezra-missing link: Aktas-border with Georgia-gauge change to 1536mm (non ECO country: [missing link: Border with Turkey-Ahalkalaki]-route in Georgia through Tbilisi- border with Azerbaijan)

Project Name: **Sivas-Erzincan-Erzurum-Kars Railway Project**

Project ID:

Project Description: **With Sivas-Erzincan-Erzurum-Kars Railway Project, new double track high seed line with signalling, electrification and communication systems will be constructed, 710 km in length, along with constituting the East-West axis in the high speed train line and shortening of the current traveling time from 14 hours to 5 hours.**

The project will be implemented in 3 sections; Sivas-Erzincan, Erzincan-Erzurum and Erzurum-Kars. Project preparation and design studies along with Tender Dossier preparation for each section are going on.

Rationale and Objectives: **As complementary to Ankara-Istanbul HST, Ankara-Sivas HST, Halkali-Kapikule Railway and Kars-Aktas Railway Projects; Sivas-Erzincan-Erzurum-Kars Railway Project will ensure uninterrupted high-standard railway line along the route of Europe-Caucasus-Middle Asia in east-west direction. Sivas-Kars corridor is one of the main routes of Turkey in terms of railway linking east and west.**

The existing Sivas-Erzincan-Erzurum-Kars line is mostly single track. Considering existing

railway, since geometric standards and physical condition are low, superstructure is worn-out and operation is on single line, it is impossible to reach high speed. Low speeds, old infrastructure and travel time between Sivas-Kars of around 14 hours.

High-standard railway line geometric standards dictate the need for a new alignment, and double tracks. Construction of high-standard railway between Sivas and Kars will help Turkey to boost economic and regional development. This corridor, being one of the most important traffic arteries of the existing network, provides linkage between Europe and Asia. Similarly, following Ankara and East Anatolia, one can reach to Caucasia and Russia on one side and to Iran on the other, through which access to Middle Asia and Far East is possible.

The project supports the general objective of development of transport via the country's main cities and constitutes therefore a very important element of coordinated intermodal transport in Turkey.

Construction of high-standard railway between Sivas and Kars will provide a time-efficient, comfortable and safe transportation opportunity. The project will make a contribution to mitigate the bottleneck situation of the long travelling time between Kars and Sivas.

The project is carried out in order to provide a time-efficient, comfortable and safe transportation system. The major objectives of the Project are summarized below:

- **Transport time savings for passengers**
- **Improved transport safety and comfort**
- **Improved transport reliability**
- **Increased share of railway in the national transportation network**
- **Decreased traffic load on the state highway between Kars and Sivas**
- **Minimized environmental pollution due to exhaust gases**
- **Decreased accident rates**

Expected impacts and benefits: **Travel time for the time being is around 14 hours and will be around 5 hours when the project is completed. The existing passenger traffic on rail will be shifted to new high speed line and existing line will be mainly used for freight transport. Consequently more capacity will be available for freight trains. The existing line is 762 km and will decrease to 710 km in length.**

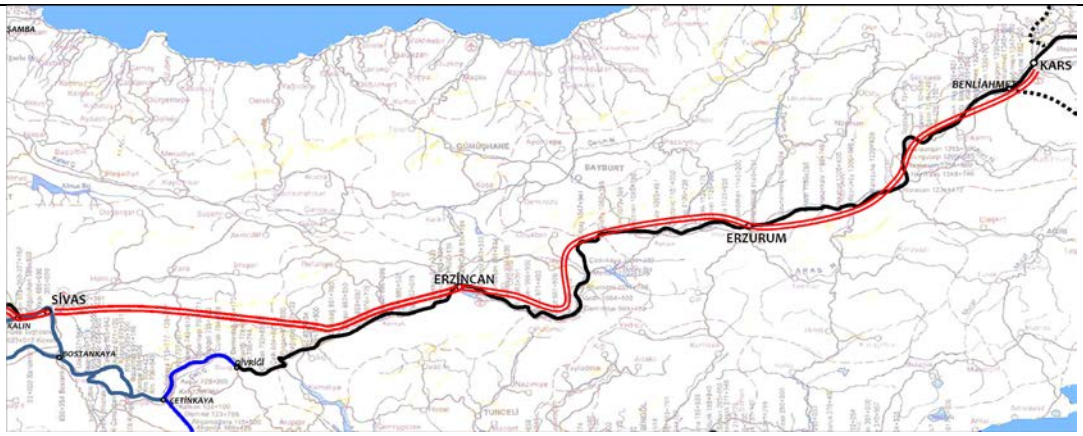
New line will be installed ERTMS with GSM-R systems, which will ensure interoperable rail transport with higher level of safety.

New construction of a railway line on future TEN-T railway network or in connection with existing TEN-T

Contact address/details:

Section 1. Project Technical Characteristics:

760. Location (latitude/longitude or alternatively a map):



761. Start point/node/city **Sivas**

762. End point/node/city **Kars**

763. AGC /AGTC Reference No. (if applicable):**C-E7O**

764. Trans-Asian Railway (TAR) ■ **YES** ☐ NO

765. Length (in km): **710**

766. Track gauge (mm):**1435**

767. No of tracks (DT=double, ST=single):**DT**

768. Loading gauge (UIC):**GC**

769. Traction: ■ **Electrified** ☐ Non-Electrified

770. Signalling type: ■ **Automatic** ☐ Manual

771. Maximum allowed speed - passenger trains:**250**

772. Maximum allowed speed - freight trains: **65 (The capacity of the existing conventional line will mainly be dedicated to freight transport)**

773. Travel transit time pass/ freight trains(hours): **for the time being 14 h; 5 h after project**

774. Maximum load per axle (tones): **22,5**

775. Maximum capacity (trains/day): **n.a.**

776. Average Daily Train Traffic - Passenger trains[1]: **for the time being 12.**

777. Average Daily Train Traffic - Freight trains[1]: **for the time being 30 (The capacity of the existing conventional line will mainly be dedicated to freight transport).**

778. Expected (passenger) traffic increase (in % - both existing and generated):

779. Expected (freight) traffic increase (in % - both existing and generated)**: The capacity of the existing conventional line will mainly be dedicated to freight transport.**

780. Volume of cargo moved (tones and TEUs)[1]:

Sivas-Bostankaya	**2,5 Million Tones**
Bostankaya-Cetinkaya	**3,5 Million Tones**
Cetinkaya-Divriği	**4,5 Million Tones**
Divrigi-Erzurum	**0,6 Million Tones**
Erzurum-Kars	**0,2 Million Tones**

The capacity of the existing conventional line will mainly be dedicated to freight transport.

781. Current Bottleneck/Missing Links:

Section 2. Project Information Concerning Criteria

ON-OFF CRITERION:

Serve for the development of a transport corridor within the ECO countries
YES NO , IF YES PLEASE PROCEED:

782. Is the project serving international connectivity? YES NO

If **yes** is it expected to:

A: Greatly improve connectivity, B: Significantly improve connectivity, C: Somewhat improve connectivity, D: Slightly improve connectivity, E: Does not improve connectivity.

783. Will the project promote solutions to the particular transit transport needs of the landlocked countries? **YES** NO

If **yes** the project is providing solution:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

784. Will the project connect low income and/or least developed countries/regions with ECO member states, major European, and Asian markets?

YES O

If **yes** the project is providing connection:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

785. Will the project cross natural barriers, removes bottlenecks, raises substandard sections to meet international standards, or missing nks?
YES NO

If **yes,** the project contributes to the above:

A: Greatly, B: Significantly, C: Somewhat, D: Slightly, E: Does not

786. Will the project have a high degree of urgency due to importance attributed by the national authorities and/or social interest? **YES** NO

If **yes** the project is included in the national plan and:

A: requires immediate realization (for implementation up to 2013), B: considered very urgent (for implementation up to 2016), C: considered urgent (for implementation up to 2020), D: may be postponed until after 2020,

If the project is not included in the national plan:

E: Not in the national plan.

787. Will the project potentially create negative environmental or social impacts (pollution, safety, etc)? ■ YES ☐ **NO**

If **yes,** the magnitude of impact is:

A: No impact, B: Slight impact, C: Moderate impact, D: Significant impact, E; Great impact.

Project Financial Information

788. Project cost (in million$): **4000 Million $**

789. Out of which fixed investments: **n.a.**

790. Expected Starting Date: **2010**

791. Expected Completion Date: **2014**

792. IRR:**n.a.**

793. Project's stage: ☐ Construction ☐ Tendering ■ **Study/Design**

☐ Planning ☐ Identification

794. Expected Funding Sources (and the % of funding for each one):

a. National Funds:....
b. Foreign aid:...
c. Bank loans: ...
d. Grants: ...
e. Private Funds (PPP basis). Please provide details.....
f. Other....

795. Foreign cooperation sought ☐ YES ■ **NO**

If yes, please describe.....

796. Expenses made so far (2010), as a percentage of the project's total cost:**n.a.**

797. Percentage of budget of public works allocated: **n.a.**

798. GDP (year 2010 in million $): **736**

799. Implementation arrangements... **n.a.** .....

800. Critical success factors: **governmental support, availability of funds, cooperation between stakeholders,**

801. Recommendations with regards to potential sources of funding for the cases of non-secure funding, (if applicable).....**n.a.**.....

802. Reasons for which project implementation has been delayed, (if applicable) **n.a**.

803. Any relevant Documentation?

Pre-feasibility study..... ☐

Feasibility study..... ☐

Technical Studies (Design etc)..... ☐

Other.....

804. Other project-related information?.....