



FIRST TRACECA INVESTMENT FORUM

Brussels, 12th October 2010

NORTH SOUTH ROAD CORRIDOR INVESTMENT PROGRAM



REPUBLIC OF ARMENIA



**North South Road
Corridor covers
territory of Armenia
from southern border
with Iran through
Agarak -Kapan –
Yerevan -Bavra route
(M1 and M2 roads) to
northern border with
Georgia**





GEOGRAPHICAL DESCRIPTION

- **Armenian North South Road Corridor connects Central Asia to Europe, Iran, Turkey and Georgia**
- **Crossing Armenia from South to North the corridor connects to Georgia's southern road corridor reaching the ports of Poti and Batumi (Black sea), and further to the EU by sea, strictly intersects the TRACECA corridor objectives**
- **The project provides direct benefit to the improvement of Transport Corridor Europe-Caucasus-Asia in the part of juncture of Western Asia and Eastern Europe**



TECHNICAL DESCRIPTION

- **The North South is 550 km long**
- **The Project is scheduled from 2009 to 2017**
- **It constitutes to be maintained as Multitranche Financial Facility (MFF). Civil Works of Tranche 1 will start in 1st quarter of 2011**



SOCIO-ECONOMIC DESCRIPTION

Construction of North South Corridor will lead to significant improvement of existing socio-economic situation and allow achieving the following outcomes:

- **Double Armenian export and increase import in 1.8 times by 2017**
- **Increase in cross-border traffic from 4.6 up to 10 bln. ton-km by 2017**
- **Reduce travel time through the corridor from 3-4 up to 2 days**
- **Double average daily traffic from 3000 to 6000 vehicles by 2017**
- **Reduce IRI value up to 2.5 in 2017 and maintain it below 4.0 in the next 5 years**
- **New jobs and higher incomes created, reduced number of accidents, lower road transport and maintenance costs**



INVESTMENT AMOUNT AND REPAYMENT

- **The cost of Project is estimated as \$ 962 mln. excluding two sections of road located in the South**
- **Asian Development Bank agrees for loan under MFF \$ 500 mln., \$70 mln. Tranche 1 signed, ongoing**
- **Under co-financing JICA has agreed to finance \$70 mln.**
- **European Investment Bank has agreed to participate in Project. The fact-finding mission has took place in Armenia 04 Oct 2010.**
- **Taxes under the Project are financed by the Government of the Republic of Armenia as co-financing**



OTHER SOCIO-ECONOMIC DESCRIPTIONS

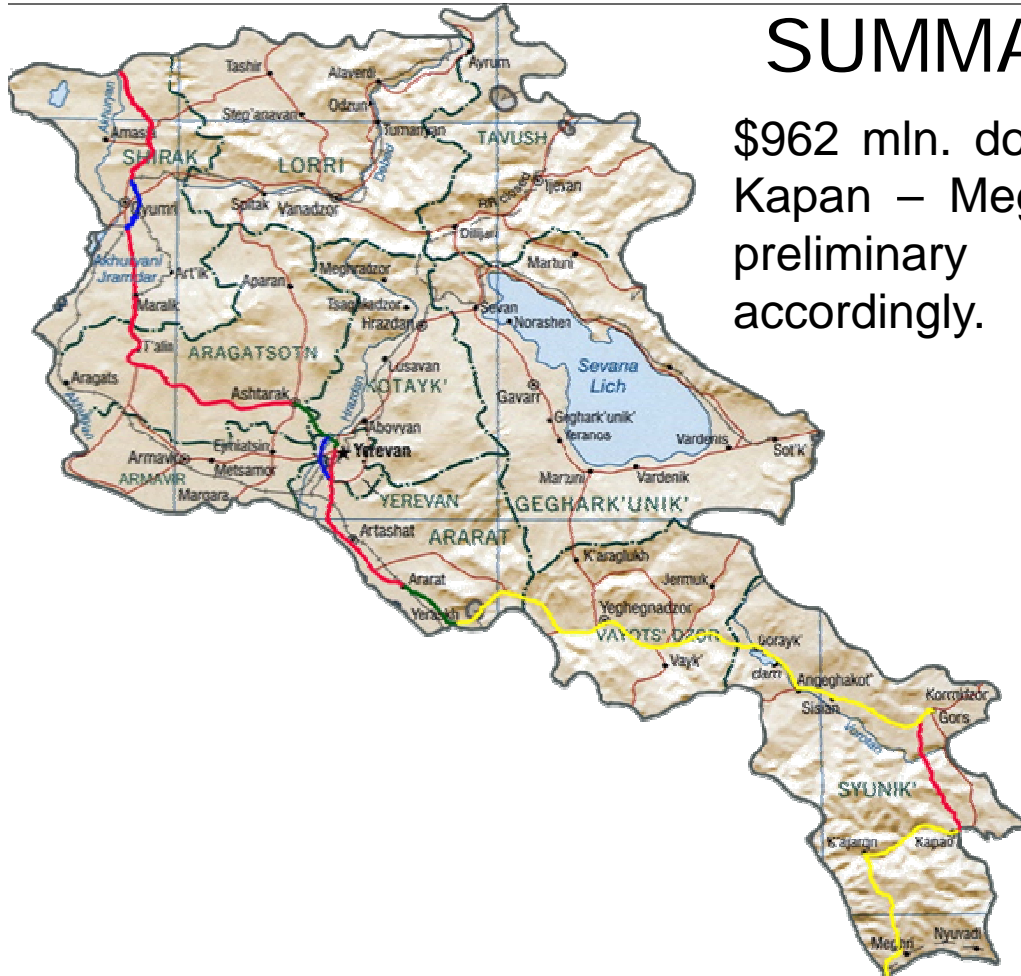
- **While Armenia is the major beneficiary, other countries in the Caucasus sub region will also benefit from a more efficient movement of traffic to and via Armenia**
- **Provided additional benefits to people through improved infrastructure and services along the road**
- **The Project will contribute to poverty reduction by stimulating economic development**
- **Increase of travel due to numerous historical sites dated 4th and 5th centuries a.c. along the North South Road Corridor**



SUMMARY

\$962 mln. does not include Yeraskh – Goris and Kapan – Meghri parts (marked yellow) which are preliminary estimated \$65 and \$200 mln. accordingly.

- As of now there is still about \$500 mln. available for your participation in this Project as co-financers.







FIRST TRACECA INVESTMENT FORUM

Brussels, 12th October 2010

REHABILITATION OF THE ARMENIAN RAILWAY INFRASTRUCTURE



REPUBLIC OF ARMENIA



REHABILITATION OF THE ARMENIAN RAILWAY INFRASTRUCTURE





GEOGRAPHICAL DESCRIPTION

- Rehabilitation of the existing rail link Yerevan-Tbilisi
- Reconstruction of seven bridges (Yerevan-Tbilisi rail link)
- Complete reopening of Hrazdan-Ijevan section (constructed in 1984, partially operating, nearly 2 km of landslide zone)
- Construction of new rail link Vanadzor-Fioletovo
- New railway Gagarin-Meghri/Iranian border



TECHNICAL DESCRIPTION

Rehabilitation of the existing rail link Yerevan-Tbilisi

OPTION "A"

Complete renewal of 101 km of track equipment, with few changes in the layout. Rehabilitation of the infrastructure.

RESULTS: Upgrade of the line up to the required standards.

OPTION "B"

Complete renewal of 60 km of track equipment, with few changes in the layout. Rehabilitation of the infrastructure.

RESULTS: Upgrade of the line up to the required standards.

Three options of Intervention for the Technology

OPTION 1

Total replacement of existing ARI (All-Relais Interlocking) with SSISB (Solid State Interlocking Signal Box) and complementary interventions to correct the mentioned above abnormalities

OPTION 2

Partial replacement of actual ARI (All-Relais Interlocking) and refitting of the others. Complementary interventions to correct the mentioned above abnormalities

OPTION 3

Implementation in the main stations of a variant of SSISB (Solid State Interlocking Signal Box) able to control minor installations furnished of SSISB systems, with a reduced equipment and less expensive (SSISB multi-stations)

RESULTS: Safety of operations, increase of maximum speed and of line carrying capacity, reduction of delays, Train Supervision System, diagnostic and statistic control (depending on the option).



TECHNICAL DESCRIPTION

Reconstruction of seven bridges (Yerevan-Tbilisi rail link)

Bridges' location: Tbilisi-Yerevan Railway

Years of construction: 1898-1963

Recommendations: Strengthening of the reinforced concrete span structure in critical state, Reconstruction and replacement of the span structure, construction of a new bridge next to the old one using the new metal span structures obtained in 2005 (RA budget) and moved to Armenia.

HRAZDAN-IJEVAN SECTION

Total length: approximately 48 km

- Landslide arrangements
- 8 bridges and 10 tunnels to be rehabilitated
- Track equipment and signaling system renewal

NEW RAIL LINK VANADZOR-FIOLETOVO

Total length: 32-47 km, depending on the alternative chosen

NEW RAILWAY GAGARIN-MEGHRI/IRANIAN BORDER

Approximately 400 km, including tunnels (longest tunnel longer than 5 km), bridges, project speed – 100 km/h, width of the rail track – 1520 mm

Approximate project cost: € 1.1 billion



SOCIO-ECONOMIC DESCRIPTION

- More complete services for goods and passenger transportation
- Growth of transportation speed on the principal rail link Yerevan-Tbilisi
- Reducing of transit time
- Reducing percentage of accidents on principal rail links
- Modal shift from road to rail
- Improvement of ecological environment



INVESTMENT AMOUNT AND REPAYMENT

Rehabilitation of the existing rail link Yerevan-Tbilisi

Option A: € 647.700.000,00

Option B: € 475.000.000,00

Three options of Intervention for the Technology

From 150 million euro to 210 million euro, depending on the option

Reconstruction of seven bridges (Yerevan-Tbilisi rail link)

€ 9.600.000,00

Hrazdan-Ijevan section

1. Complete renewal: € 176.500.000,00, 2. Partial renewal in the section with landslide and general overhaul: € 121.850.000,00

New rail link Vanadzor-Fioletovo

€ 200.000.000,00 (€ 5.000.000,00 per km)

Source of repayment:

Budget and/or PPP



SUMMARY

**Approximately
€ 915.000.000,00**

(excluding new railway Gagarin-Meghri/Iranian border)



- **Shorter route to link Tbilisi and Yerevan (70-120 km depending on the option)**
- **Challenging option for the Transcaucasus Network to create important traffic flows of oil products and raw materials between Black Sea and Countries located on the Silk Road**
- **West-East railway corridor, 180 km (Turkish border-Georgian border-Azeri border)**

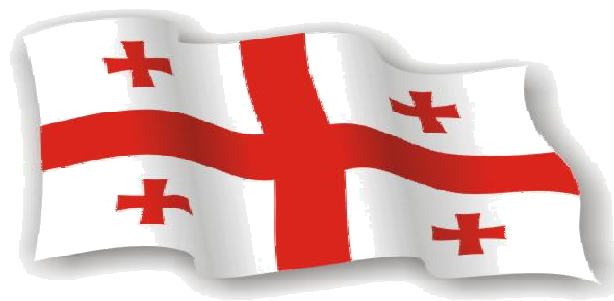




FIRST TRACECA INVESTMENT FORUM

Brussels, 12th October 2010

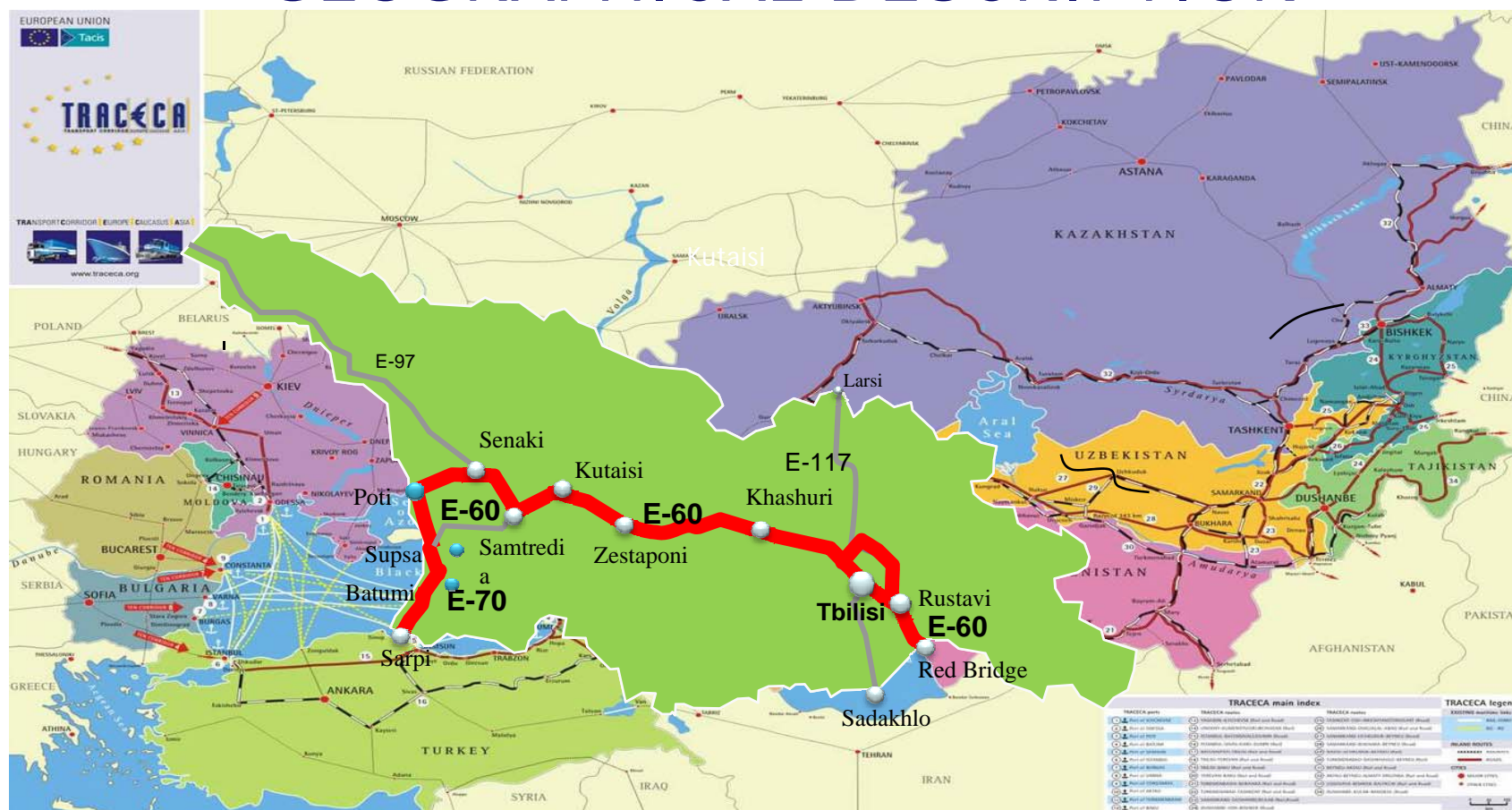
**Zestaponi-Kutaisi-Samtredia 2 Lane Highway
Widening (II phase)**



GEORGIA



GEOGRAPHICAL DESCRIPTION





TECHNICAL DESCRIPTION

Widening (upgrading) Highway from 2 lane to 4 lane

- Total Length – 59 km
- Existing Capacity – 7 000 vehicles per day
- Bridges -10 Unit
- Viaducts – 10 Unit (1 – railway)
- Existing Lanes – 2
- Lanes After Construction – 4
- Design for modernization is based on the TEM standards

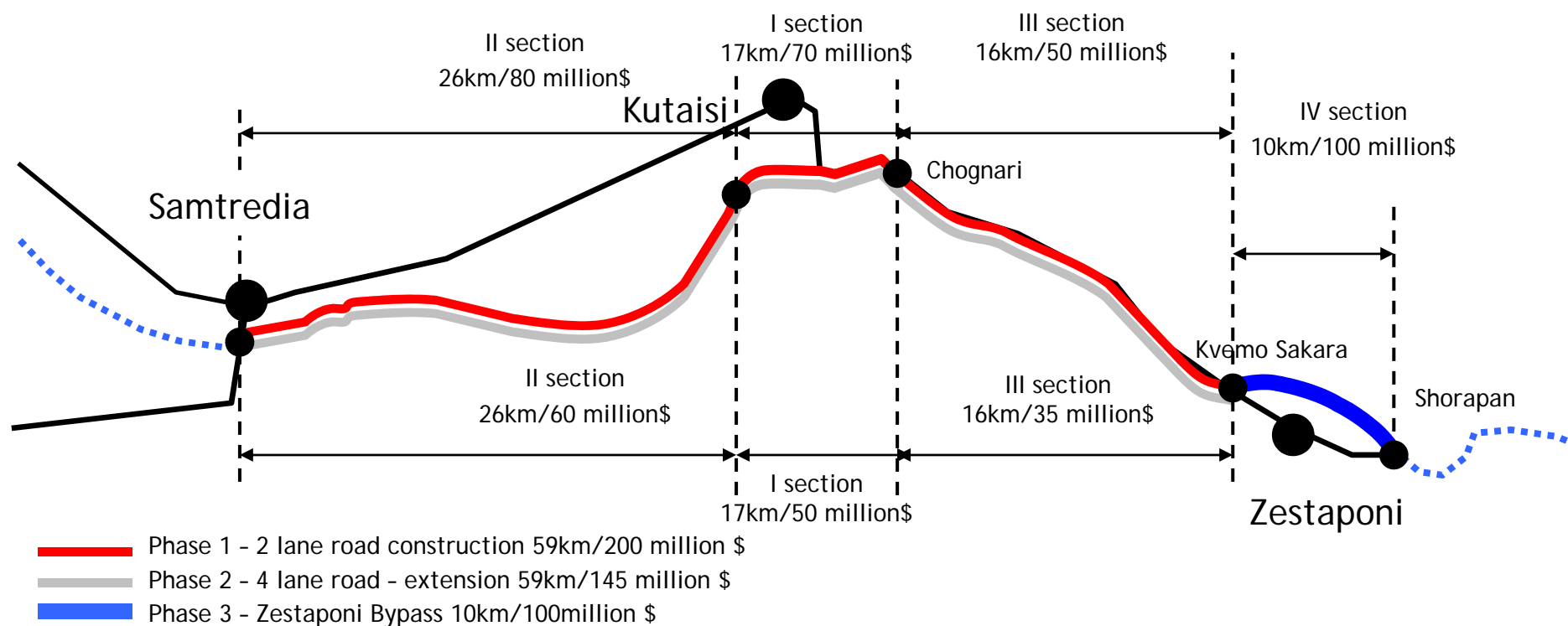
AADT (2008 year)

Section Name	Private Car	Mini Buses<15, Pickups	Buses & Trucks	Trailers & > 3 axels	Sum
Zestaponi-Kutaisi	6 288	1 043	556	701	8 588
Kutaisi-Samtredia	6 008	1 719	446	441	8 614



TECHNICAL DESCRIPTION

Total: 59 km; 145 million \$ (II Phase)





SOCIO-ECONOMIC DESCRIPTION

Safety

- Project implementation is part of **Georgian National Traffic Safety Strategy**
- Can ensure **high road capacity**
- **No traffic jams**
- **Marking and Signaling** in accordance with international standards





SOCIO-ECONOMIC DESCRIPTION

- Feasibility Study – has been done
- Investment Volume

Section	I phase		II phase	
	Cost (Million USD)	Cost per km (Million USD)	Cost (Million USD)	Cost per km (Million USD)
Zestaponi-Kutaisi	50	3.13	35	2.19
Kutaisi Bypass	70	4.12	50	2.94
Kutaisi-Samtredia	80	3.08	60	2.31
TOTAL	200	3.39	145	2.46

- Investment Period
 - Phaze I – 2010-2013
 - Phaze II – 2013-2015



SUMMARY

Investment Need **145 Million USD**

- **State Priority** (policy documents):
 - ✓ Georgia Without Poverty
 - ✓ Basic Data & Direction (BDD)
- One of the main sections on the **TRACECA** route
- The shortest link between **Black Sea & Caspian Sea**
- **Simplified** border crossing procedures
- Growth of **International Transportation (6%)**



