

TRACECA INVESTMENT FORUM 2012

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SOFT MEASURES IN HIGHWAY INVESTMENTS / MAIN TRANSIT HIGHWAYS IN ARMENIA

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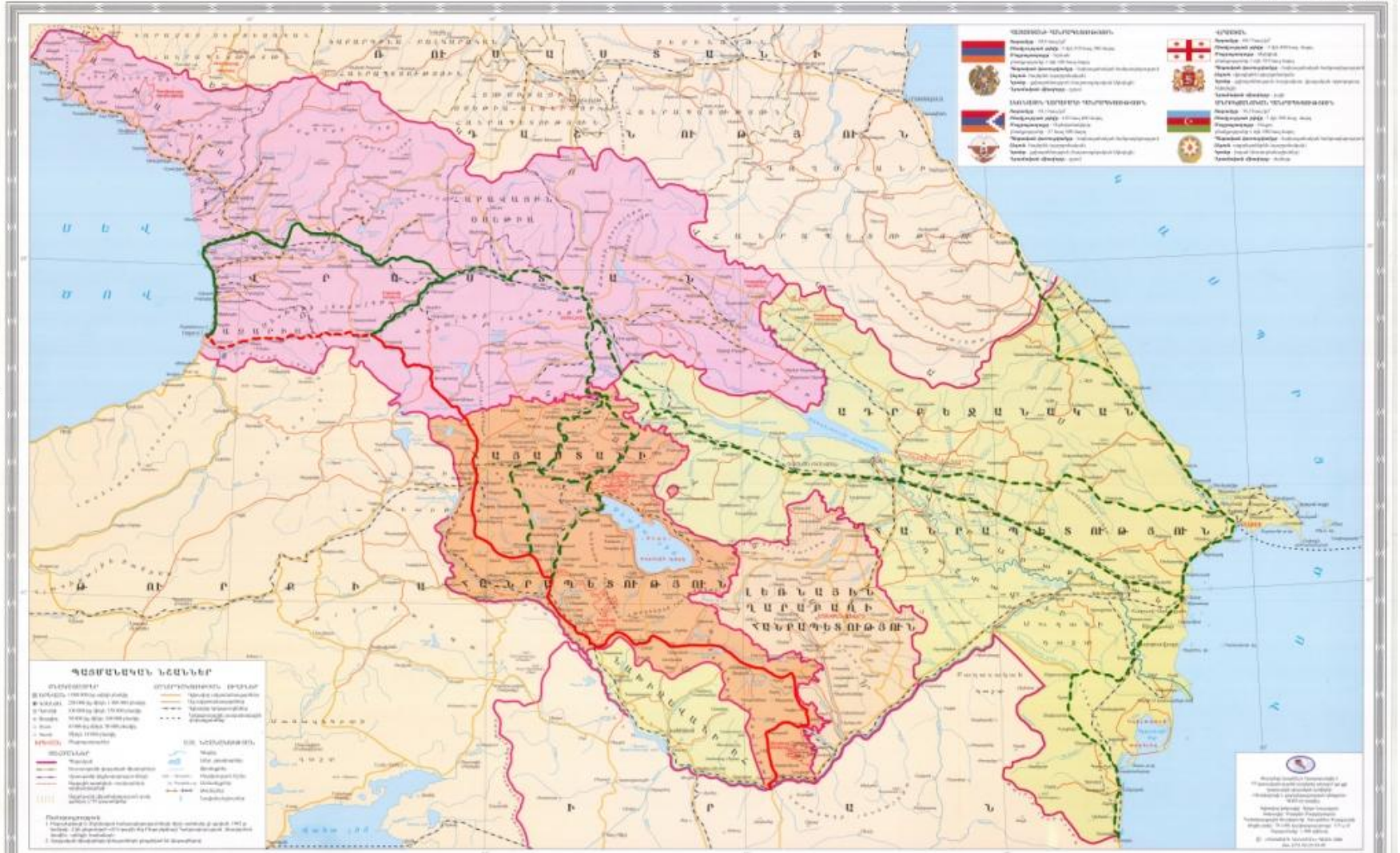
TRANSIT HIGHWAYS IN ARMENIA



TRANSIT HIGHWAYS IN THE SOUTH-CAUCASUS REGION

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Մասշտաբ 1:1000 000



MAIN OBJECTIVES OF HIGHWAYS INVESTMENT PLANS

- ❑ **Rehabilitation of main transit highways**
- ❑ **Reducing travel time and transport costs**
- ❑ **Separation of passengers and freight transport routes:**
 - Passenger route: Yerevan-Sevan-Ijevan-Noyemberyan-Bagratashen
 - Freight route: Yerevan-Ashtarak-Aparan-Spitak-Vanadzor-Alaverdi-Bagratashen

Gogavan (Republic of Armenia – Georgian border)

Bagratashen (Republic of Armenia – Georgian border)



Yerevan-Sevan-Ijevan-Noyemberyan-Bagratashen/Georgian border.

Length - 200.1 km, 62 km of which are 4-lane.

AADT – 13739 vehicles/day (Abovyan RP point).

Link to health/summer/winter resorts (Tsakhkadzor, Hankavan, Aghveran, Sevan Lake, Dilijan)

Mostly used by passenger transport (buses&cars)

Gogavan (Republic of Armenia – Georgian border)

Bagratashen (Republic of Armenia – Georgian border)



Yerevan-Ashtarak-Aparan-Spitak-Vanadzor-Alaverdi-Bagratashen/Georgian border.

Length - 189.1 km, 11 km of which are 4-lane.

AADT – 2453 vehicles/day (Vanadzor and Alaverdi ARD points)

Mostly used by freight transport (trucks)

PROJECT FEASIBILITY

- **Preliminary surveys (visual inspection and instrumental tests):**
 - *Pavement, structures, drainage and road safety*
 - *IRI measured for each 100 m of the road*

- **Preliminary feasibility study (May 2011)**
 - ❖ **Economic analysis (HDM-4 assumptions):**
 - *AADT average growth rate: 6%*
 - *Discount rate: 12%*
 - *Rehabilitation strategies: Surface Treatment, Asphalt-concrete Overlay and Reconstruction*

PROJECT COST AND FUNDING

- ❖ **Rehabilitation and reconstruction works costs:**
 - *AMD 150 million (USD 400 thousand) per km (excluding structures)*
 - *20-30% additional costs for structures (bridges, culverts, retaining walls)*

- ❖ **Funding:**
 - *IFIs (EIB, WB, JICA)*
 - *Government of Armenia (co-financing taxes)*

MAIN OUTCOMES

- ✓ *Improved service level for 450-480 km highways*
- ✓ *10-12 % reduction of travel time*
- ✓ *12-14 % reduction of vehicle operation costs*
- ✓ *Reduced road maintenance and operation costs*
- ✓ *Improved Road Safety*
- ✓ *Promotion of international transit and tourism*

ACCOMPANYING SOFT MEASURES

Successful investments should go “hand in hand” with the following accompanying soft measures:

- ❑ Safety and maintenance
- ❑ Security
- ❑ ITS applications
- ❑ Enforcement

Towards a harmonized approach across TRACECA countries

SAFETY and MAINTENANCE

Upgrading of the existing links to the best technical design standards:

- ❑ road layout; visibility; cross sections; road paving; crash barriers; road signs; snow and ice control**

Centralised accident register and “black spots” monitoring programme

Keeping of proper levels of maintenance to guarantee infrastructure basic performance (LoS)

SECURITY

Infrastructures and services for the security of drivers, passengers, vehicles and transported freights:

- emergency response**
- safe trucks parking areas**
- road surveillance**

ITS APPLICATIONS

New technologies to be developed on a step by step basis:

- ❑ **traffic management and mobility management** (digital cameras, traffic control centre, variable message signs, traffic monitoring systems)
- ❑ **user information** (electronic road maps, pre-trip information)
- ❑ **emergency management and accident management**

ENFORCEMENT

Road traffic rules enforcement, including infringements like:

- Speed
- Maximum allowed weight
- Drinking and driving

to be developed through:

- police training
- ITS and instruments
- education



THANK YOU!