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Report No: 39946 - GE

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT
IN THE AMOUNT OF SDR 22.4 MILLION
(US$35.0 MILLION EQUIVALENT)

TO

GEORGIA

FOR A

SECOND EAST-WEST HIGHWAY IMPROVEMENT PROJECT

November 19, 2007

Sustainable Development Department
South Caucasus Country Department
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective August 28, 2007)

Currency Unit	=	GEL
GEL1.67	=	US$1
US$1.53	=	SDR1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
CIS	Commonwealth of Independent States
CPS	Country Partnership Strategy
CQS	Consultants' Qualifications Selection
CY	Calendar Year
DA	Designated Account
DC	Direct Contracting
EA	Environmental Assessment
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia
ECMT	European Conference of Ministers of Transport
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
EU	European Union
FEWHIP	First East-West Highway Improvement Project
FA	Financing Agreement
FBS	Fixed Budget Selection
FM	Financial Management
FMM	Financial Management Manual
FY	Fiscal Year
GDP	Gross Domestic Product
GEL	Georgian Lari (Currency unit)
GNI	Gross National Income
GR	Georgian Railways
HDM 4	Highway Design and Maintenance model, Version4
IBRD	International Bank for Reconstruction and Development
IC	Individual Consultant
ICB	International Competitive Bidding
IDA	International Development Association
IFC	International Finance Corporation
IFR	Interim Unaudited Financial Report
IMF	International Monetary Fund
IPF	Infrastructure Pre-investment Facility
ISDS	Integrated Safeguard Data Sheet
KF	Kuwait Fund
JBIC	Japan Bank of International Cooperation
LCS	Least Cost Selection
LSG	Local Self-Government
MCC	Millennium Challenge Corporation
MoED	Ministry of Economic Development
MoF	Ministry of Finance
NBG	National Bank of Georgia
NCB	National Competitive Bidding
NPV	Net Present Value
OECD	Organization for Economic Co-operation and Development
PAP	Project Affected People
PCN	Project Concept Note
PDO	Project Development Objective
PFM	Public Financial Management
PFS	Project Financial Statements
PHRD	Japanese Policy and Human Resource Development grant
PIC	Public Information Center
PID	Project Information Document
PPIAF	Public-Private Infrastructure Advisory Facility
PP	Procurement Plan
PRGF	Poverty Reduction and Growth Facility
QCBS	Quality and Cost Based Selection
RAP	Resettlement Action Plan
RDMED	Road Department of the Ministry of Economic Development
RPF	Resettlement Policy Framework
SDR	Special Drawing Rights (Currency unit)
SEWHIP	Second East-West Highway Improvement Project
SH	Shopping (Procurement)
SLRP	Secondary and Local Roads Project
SoE	Statements of Expenditure
SSS	Single Source Selection
TA	Technical Assistance
TOR	Terms of Reference
TRACECA	Transport Corridor Europe-Caucasus-Asia
TRRC	Transport Reform and Rehabilitation Center
UNDB	United Nations Development Business
USAID	United States Agency for International Development
WHO	World Health Organization

Vice President:	Shigeo Katsu, ECAVP
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GEORGIA
Second East-West Highway Improvement

CONTENTS

GEORGIA

SECOND EAST-WEST HIGHWAY IMPROVEMENT

PROJECT APPRAISAL DOCUMENT

EUROPE AND CENTRAL ASIA

ECSSD

Date: November 19, 2007	Team Leader: Olivier P. Le Ber
Country Director: D-M Dowsett-Coirolo	Sectors: Roads and highways (100%)
Sector Manager/Director: Motoo Konishi	Themes: Infrastructure services for private sector development (P);Regional integration (S);Other public sector governance (S)
Project ID: P094044	**Environmental** screening category: Full **Assessment**
Lending Instrument: Specific Investment Loan	

Project Financing Data

[ ] Loan [X] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 35.00
Proposed terms: IDA terms of 20 years maturity including 10 years grace.

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	45.00	0.00	45.00
International Development Association (IDA)	3.00	32.00	35.00
Total:	48.00	32.00	80.00

Borrower:
Georgia
Georgia

Responsible Agency:
Roads Department (RDMED)
29a Gagarin Street
0160 Tbilisi
Georgia
Tel: (+995 32) 38 16 33 Fax: (+995 32) 31 30 52

Estimated disbursements (Bank FY/US$m)									
FY	2008	2009	2010	2011	2012	0	0	0	0
Annual	4.40	25.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative	4.40	29.70	35.00	35.00	35.00	35.00	35.00	35.00	35.00

Project development objective ***Ref. PAD B.2, Technical Annex 3***

The project development objectives are:

(i) To contribute to the gradual reduction of road transport costs and improve ease of transit, and safety along the central part of Georgia's East-West corridor, through upgrading a segment of the East-West Highway from Tbilisi to Rikoti; and

(ii) To strengthen the capacity of the government agencies (and particularly RDMED) to develop and implement a traffic safety program.

Project description *[one-sentence summary of each component]* ***Ref. PAD B.3.a, Technical Annex 4***

Component 1: Upgrade of the Igoeti to Sveneti section of the E60 Highway from two to four lanes. This component comprises: (i) civil works for the construction of a new two lane carriage way along a 24 km section of the E60 highway from Igoeti to Sveneti, the construction of 4 bridges and the rehabilitation of the existing two lanes; (ii) consultant services for the supervision of the works; and (iii) the design of another section of the E60 Highway to be specified by the Government at a later date to help prepare a future project.

Component 2: Road Safety. This component comprises works, specialized consultancy services, training, and equipment as needed to strengthen the capacity of RDMED to develop and implement a traffic safety program along the E60 corridor and other roads.

Component 3: Project implementation. The component will fund consultant services for TRRC, project audits and will finance incremental operational costs to support implementation of the project.

Which safeguard policies are triggered, if any? ***Ref. PAD D.6, Technical Annex 10***
Environmental Assessment (OP/BP 4.01)
Natural Habitats (OP/BP 4.04)
Pest Management (OP 4.09)
Physical Cultural Resources (OP/BP 4.11)
Involuntary Resettlement (OP/BP 4.12)
Forests (OP/BP 4.36)

Significant, non-standard conditions, **if any**, for:
Ref. PAD C.7
Board presentation:
None

Loan/credit effectiveness:
(i) RDMED and TRRC have signed an amendment to the existing Implementation Support Agreement spelling out their respective roles and responsibilities.

Covenants applicable to project implementation:
(i) RDMED, through TRRC will submit to IDA a semi-annual progress report, in a format satisfactory to IDA, not later than 45 days after the end of each semester outlining the progress made in the implementation of the Project, as well as the problems encountered and how they are to be addressed.
(ii) RDMED will implement the Environmental Management Plan (EMP) developed in accordance with the environmental screening and OP/BP 4.01 Environmental Assessment, and prior to the start of the civil works on a particular section, RDMED will implement a Resettlement Action Plan (RAP) developed in accordance with the Resettlement Policy Framework (RPF) and OP 4.12.
(iii) An additional event of suspension has been included, namely that the Borrower shall have failed to notify, and provide adequate information to the Association before entering into a concession agreement for the operation and maintenance of the East West Highway financed under the project or the Association shall have raised objections to the Recipient entering into such agreement.

I. STRATEGIC CONTEXT AND RATIONALE

A. Country and sector issues

1. Georgia is a small country located to the south of the Caucasus mountain range, with Russia to the north, Armenia and Turkey to the south, Azerbaijan to the east, and the Black Sea to the west. It has a population of 4.5 million[1]. Following independence in 1991, the loss of planned production for Soviet markets, the end of large budget transfers from Moscow, and the impact of civil war and ethnic conflicts which displaced some 300,000 people, output dropped by more than 70%. The official Gross Domestic Product (GDP) in 2000 was only 30-35% of its 1989 level[2]. GDP and Gross National Income (GNI) per capita have increased significantly in the past few years. However, the country's GNI per capita of US$1,560 in 2006 is still one of lowest among lower middle-income countries.

2. ***The Rose Revolution was a defining moment for Georgia.*** The peaceful Rose Revolution in late 2003 brought into office a government of reformers led by President Saakashvili. His administration has been implementing bold reforms to fight corruption, reduce the burden of the state on the economy, move the energy sector towards efficiency and sustainability, lay the basis for improved employment and standards of living of Georgians, and develop a fiscally-sustainable social safety net. The authorities describe their reform orientation as strongly pro-market, and have been drawing inspiration from countries such as New Zealand (on state reform), Ireland (de-regulation) and Estonia (social sectors).

3. ***Progress over the last several years has been substantial.*** In the public sector, salaries and pensions are paid on time and arrears have been cleared. Public employee salaries have increased significantly. For instance, the salaries of the Road Department of the Ministry of Economic Development (RDMED) have increased substantially and are now more or less on par with the salary level in the private sector. For the private sector, the regulatory and administrative environment facing business has improved significantly. The World Bank's 2006 and 2007 Doing Business Reports rated Georgia among the top reformers, and in the latest Report for 2008 Georgia moved to 18th place in the rankings. Various indicators show a marked decrease in corruption. Investments in infrastructure have been substantial, particularly for roads and energy, with major improvements in access to reliable electricity services. At the same time, the popularity of the Government has suffered since the Rose Revolution, in part because while economic growth has generated new jobs, it has not yet been sufficient to offset labor shedding and therefore net unemployment has not reduced. Continuing the upsurge in private investment and growth will therefore be very important in the years ahead. Other challenges include the need to pay greater attention to institutionalizing reforms to ensure their sustainability, rising prices, protection of property rights and slow progress in judicial reforms and strengthening the rule of law. Finally, there has been a perception within civil society that the Government places insufficient emphasis on consultations and consensus building in pursuing its reform agenda. The Government has therefore decided to advance Presidential elections from November to January 2008, as an opportunity to test the extent of its mandate to pursue its current priorities and development strategy. Development of the East-West transit corridor, which the proposed

[1] This number does not include population of South Ossetia and Abkhazia.
[2] Although the (large) shadow economy was estimated to be up to 33% of GDP.

project supports, is likely to figure among the priorities of whichever party emerges successful in these forthcoming elections.

4. ***Georgia's prudent macroeconomic policies and structural reform programs have resulted in strong economic growth.*** Economic performance following the advent of the new government has been encouraging. Macroeconomic management in Georgia continues to show solid performance. Despite unusually severe shocks, domestic and external, the last three years have seen strong growth, macroeconomic stability, and a sound mix of fiscal and monetary policies. As a result of prudent macroeconomic policies and implementation of structural reforms, growth in 2005 was 9.6%, and in 2006 was 9.4%. The International Monetary Fund (IMF) completed its Sixth Review of the Poverty Reduction and Growth Facility (PRGF) program in August 2007.

5. ***Despite the impressive progress thus far, Georgia faces important challenges.*** Georgia's vibrant but young democracy is developing. The political system is defining more systematic instruments of consultations and communications. While recognizing that institutional development challenges will take time, the Government gives high priority to the reform of the state. In this context, the government acknowledges that the sustainability of these economic growth rates will require the deepening of the integration of Georgia with world markets. To that end, the Government has identified as a key priority the modernization and improvement of its transport infrastructure. Reforms implemented since 2004, along with investments in infrastructure and improvements in the regulatory environment, are supporting private sector growth. In the longer term, expected sources of growth include agro-processing and small manufacturing, tourism, transit trade activities, and mineral extraction and processing.

6. ***Georgia enjoys a strategic location yet to be capitalized.*** Georgia is located on the shortest route between Europe and Azerbaijan, Armenia and the Central Asian Republics through its Black Sea ports. It also links Russia and Turkey. Trade with neighboring countries, both transit and bilateral, is thus an important feature of the economy. Wholesale and retail trade services are the second largest sector of the economy, accounting for 13% of GDP and 11% of employment. Both imports and exports of goods and services have increased by more than 30% in 2006, while merchandise exports have expanded by 13% in 2006 despite the restrictions imposed by Russia. In response Georgia has developed closer economic cooperation with Turkey and Azerbaijan. In February 2007, the Tbilisi Declaration on Common Vision for Regional Cooperation was signed between Azerbaijan, Turkey and Georgia aiming at developing long-term and predictable relations on the basis of regional projects to establish energy and infrastructure links between them[3]. These new trade and energy routes are relevant to Georgia both for transit income as well as to get Georgian goods to a larger market than otherwise would be possible. Increasing revenue from oil exports in Central Asia and the Caucasus is likely to increase the demand for consumer and industrial goods.

[3] Turkey, Azerbaijan, and Georgia signed an Agreement in March 2007 to build a new railway track Kars – Tbilisi – Baku. Within the Kars-Tbilisi-Baku Railway Project a new 105-km railway section will be constructed and 76 km out of it lays in Turkey and the remainder 29 km - in Georgia. In addition, a 183-km railway section of Akhalkalaki-Marabda-Tbilisi will be repaired in Georgia to increase the carriage capacity up to 15 million tons a year.

7. ***A range of natural endowments offer strong potential for labor-intensive export-oriented growth as well as tourism activities provided the provision of adequate infrastructure enables them to develop.*** Georgia has attributes that could lead to growth in export-oriented activities, which would increase employment and broaden asset-ownership. Georgia has a comparatively open trade regime. The country benefits from an educated, inexpensive labor force, and it also has a long tradition of entrepreneurship. Fertile land and favorable climates enable the production of diverse agricultural produce[4]. Georgia's scenic mountain regions, the Black Sea beaches, and rich historical and cultural heritage offer strong tourist potential. With improving law and order, rising incomes in the region, and greater interregional connectivity through the transit corridor, Georgia has an opportunity to revive its tourist industry for the Commonwealth of Independent States (CIS) market as well as niche markets in Europe and the Far East.

8. ***Reducing poverty is an important challenge during this transition period.*** Strong economic growth has increased incomes for many Georgians in the middle and upper ranges of the income distribution. Although the bottom 30 percent of the population has not yet experienced similar increases in incomes, important non-income dimensions of poverty have improved, including significantly improved access for the poor to electricity, natural gas, safe water, health, and higher education. One of the key structural factors contributing to the high poverty levels in Georgia is the slow and unsustained economic restructuring of the first 13 years of transition. Output contraction contributed to a major reallocation of the labor force. Agriculture became the "employer of last resort" with employment in the sector more than doubling as a share of the total during 1992-2004. In addition, plot sizes shrank, leading to declining productivity.

9. Reducing poverty is a key priority of the Government's reform program. Social spending was increased by 5% of GDP between 2003 and 2005, pension and wage arrears were eliminated and a targeted poverty benefit was introduced in 2006. Poverty levels remain high in rural areas where incomes of those below the poverty line have not yet improved significantly. Improved integration of the rural population with the national economy and a reduction over time of over-employment in agricultural activities (52% of employment for 16% of GDP) should help reduce rural poverty in the years ahead. Although Georgia has put in place the conditions necessary for poverty to decline, a sustained trend toward lower poverty has not yet been established. The incidence of poverty has remained relatively flat at about 30% during the 2003-2006 period. However, it is expected that if macroeconomic stability is maintained and economic reforms implemented, the growth path will induce net job creation in Georgia and improvements in poverty indicators.

[4] Georgia has a comparative advantage in export-oriented agro-processing areas, such as wine, hazelnut, and fruit and vegetable processing, which are significant potential sources of employment, as well as market growth for farm products. Dense forests cover one third of the country and good potential for labor intensive export-oriented wood processing exists, if a sustainable forestry regime can be developed. Georgia also has numerous mineral resources that promise some employment creation.

Transport Sector and its Impact on the Georgian Economy

10. The physical location of Georgia ensures that it is a key transport link on the most direct route between the Black Sea and the Caspian Sea, and the Central Asian countries. It is situated on the historic "Silk Road", which the current Transport Corridor Europe-Caucasus-Asia (TRACECA) initiative seeks to emulate. The transport sector is one of the fastest growing in the Georgian economy. Transport, storage and communications have substantially increased their contribution to the total output, from 4.6% of GDP in 1996 to 11.5% in 2006. The transit of oil through recently completed pipelines and the railways dominates the transport contribution to GDP. In physical terms the movement of goods by land modes has increased by more than 50% between 2000 and 2005 from 4.3 billion ton-km to 6.7 billion, with the bulk of the change coming from an almost doubling of the oil transit carried by the railways. While the railways dominate the movements of oil, the roads are the preferred mode for the movement of people and non-oil freight. Although the railways have the higher modal share in ton-km terms (89%), the greater total tonnage is hauled by road transport (26.9 million tons vs. 18.9 million by rail). This suggests that the average trip length of road haulage is less than a tenth of that by rail, reflecting the dominance of the railways in the international transport of oil, which accounts for more than three-fourth of Georgia's trade. Passengers are predominantly transported by road with 267 million person trips, compared to 3.6 million by rail. In terms of ton-kilometers, total land transport movement amounts to only about one-third of the levels in 1990, a reflection of the civil war in 1991/92 and the problems associated with the breakup of the former Soviet Union. The transport infrastructure remains deficient, and hinders growth in other sectors, including agriculture. The transport infrastructure has to improve if Georgia is to benefit from its strategic transit location, to support its recovering economy, and to integrate its whole population into the national economy.

11. ***Limited transport infrastructure adds to the cost of doing business and leaves much of the population out of the national economy.*** Constraints in infrastructure add to the cost of doing business, deter foreign investment, add time and costs to the transit corridor, and leave large segments of the population out of mainstream economic activities. Analyses show a close correlation between poverty in rural households and the extent to which they are linked to markets. Poor transport infrastructure partly explains why almost two thirds of rural household agricultural production is for self-subsistence and that about 20% of rural households do not trade at all. The World Bank Rural Infrastructure survey for Georgia revealed that only in five percent of surveyed communities were roads repaired within the last five years, while in 41% of communities they were last repaired 15 or more years ago. Farmers surveyed in Georgia believe that improved roads will help increase their income by providing easier access to the markets. Poor connectivity has also contributed to the weak linkages between farmers and agro-processors as few intermediate agents, wholesalers, or farmer-based organizations exist. The Bank study indicated that local road and bridge rehabilitation projects generate clear economic benefits at the community level, decreasing the importance of barter trade and increasing the number of small and medium enterprises.

12. ***Government's transport strategy is to support market integration.*** The Government transport sector strategy is to develop the infrastructure and institutional setting of the sector to support market integration and to maximize the country's potential as a transit economy.

Progress in the implementation of the current sector strategy has been impressive. To that end, the country's main ports and airports have been, or are being, concessioned to the private sector; the railways are moving towards the development of profit centers and the adoption of modern marketing techniques; customs are being reformed to improve trade facilitation and reduce corruption; a decentralization process is under way to devolve local infrastructure to local governments; and a massive effort is being made, with the support of the international financial community, to upgrade the road network and reduce travel costs. The sector agenda includes major challenges, among which: (i) the legal and regulatory framework of the sector has to be overhauled to incorporate the right balance in the interface of the private and the public sectors, ensuring fair competition, safety and attention to environmental concerns; (ii) institutions have to be strengthened to fulfill their policy making, monitoring and executing roles; (iii) the decentralization process will require careful implementation to ensure that local authorities acquire the technical and financial resources necessary to deal with their new obligations; (iv) as road investments move from the more obvious works on the heavily transited international arterial roads towards the preservation of these assets and the upgrading of the secondary network, it becomes imperative to have in place the capabilities for efficient road management based on modern information systems; and (v) the materialization of the benefits of a transit economy, and the ability to compete with the now preferred alternative routes, will require a concerted public/private effort to design and implement a vision for Georgia that significantly transcends the transport sector.

Road Sector

13. The road network consists of 1,497 kilometers of international roads, with about 92% in good to fair condition; 5,446 kilometers of secondary roads of which 28% are in poor condition and need rehabilitation; and 13,386 kilometers of local roads responsibility for which has been transferred to Local Self-Government (LSG) bodies[5]. There are five main roads and highways, totaling 859 km. These are: (i) Poti–Tbilisi–Red Bridge; (ii) Mtskheta–Kazbegi–Larsi; (iii) Sarpi–Batumi–Samtredia; (iv) Khashuri–Akhaltsikhe–Turkish border; and (v) Tbilisi–Marneuli–Guguti. The often rough topography, the low-capacity highways (often only 7 meters wide without shoulders), the inadequate maintenance regime, the poor technical standards of vehicles, and other adverse conditions mean the traffic flow is slow and the risk of accidents is high.

14. ***The improved conditions of the road network reflect the high priority the Government has placed on road maintenance.*** The present government has as one of its top priorities the improvement of Georgia's roads. With the support of the international community the Government is expecting to bring the main international network of 1497 km to maintainable conditions by 2009. The government is committed to avoid the deterioration of the newly rehabilitated and/or improved roads and has dramatically increased resources for maintenance. The road budget was GEL 125.8 million in 2005, GEL 181.3 million in 2006 and is expected to reach GEL 280 million in 2007. The increase in funding has reversed somewhat the results from the decline in road maintenance expenditures, from GEL 125.1 million (US$59.5 million) in

[5] Under the Organic Law on LSG Bodies, the responsibility for all local roads has been transferred to the LSG units effective January 1, 2007, after local elections in October 2006 and the implementation of territorial-administrative reform.

1988 to GEL 26.5 million (US$13.3 million) in 2002, in nominal terms[6]. While road conditions have improved, road infrastructure remains inadequate and this has resulted in longer transit times, despite the relatively shorter distances, adds to transport costs and deters usage of the Georgian transit route. In a recent study examining the impact of road network quality on intra-regional trade in Europe and Central Asia (ECA) countries it was found that from the many factors expected to have an impact on the growth of foreign trade (e.g. tariff reductions, trade facilitation measures, or export/import time), road infrastructure improvements had the highest impact, with the potential of increasing regional trade by 70%[7].

15. ***The Government is focused on improving road infrastructure.*** The road sector is funded directly from the state budget, and the government has committed itself to provide adequate funds as agreed with International Development Association (IDA) for the ongoing Secondary and Local Roads Project (SLRP) and the First East-West Highway Improvement Project (FEWHIP). IDA has provided US$20 million credit for the rehabilitation of about 250 km of local and secondary roads through the SLRP, and the project's technical assistance (TA) component is funding the development and implementation of regional road maintenance plans. To better allocate resources within the sector, RDMED has created regional offices to enhance local prioritization of road rehabilitation and periodic maintenance needs. Under the FEWHIP launched in 2007, IDA is providing US$19 million credit to upgrade the section on the E60 Highway from Agaiani to Igoeti, and TA for various aspects of the road sector institutional development - from modernizing the curriculum of the road engineering department at the Technical University, preparing standards for design and bidding documents to improving RDMED human resource management practices and capacity building.

16. Besides increasing the road maintenance budget, the Government is using its resources, in addition to external funding, for new construction of roads. The Government spent GEL 14.5 million in 2005 and GEL 52.4 million in 2006 for new construction in the road sector, while nothing has been spent in the previous decade . The Government's budget for new construction for 2007 is GEL 91.5 million, and nearly GEL 500 million is planned to be budgeted for road construction alone in 2008. For instance, the Government is accelerating the pace of improvement of the E60 East-West Highway. It used its own budget for the 16 km upgrade from Natakhtari to Agaiani to dual carriageway which was half completed in September 2006. This is followed by two sections financed by IDA via the FEWHIP and the Second East-West Highway Improvement Project (SEWHIP). Then the next 15 km section from Sveneti is expected to be financed again from the budget with detailed design already completed. The section thereafter is expected to be upgraded via the Kuwait Fund (KF). Japan Bank of International Cooperation (JBIC) is investigating the possibility of supporting the E60 Highway improvement[8]. Private

[6] In the latter year, expenditures averaged a little over US$600 per kilometer, whereas the requirement based on experience elsewhere, ranges between US$4,000 to US$6,000 per kilometer.

[7] Shepherd, Ben and John S. Wilson, *Road Infrastructure in ECA: Does Network Quality Affect Trade?* Final Paper, December 22, 2006.

[8] The JBIC mission was in Georgia in August 2007 and is financing a feasibility study to be finalized in March 2008. While they have not yet identified any particular section of the Highway, JBIC's support could be significant and would be available in late 2008.

sector support is also considered through concessioning[9]. Thus the E60 from outside of Tbilisi to Rikoti is expected to be a dual carriageway in the near future.

17. ***The Georgian government is focusing not only on increasing the quantity of funding but also on securing the quality and transparency of the expenditures.*** To that end, RDMED is emphasizing the institutionalization of the use of modern information systems to develop multi-year rolling investment and maintenance programs and is also exploring the use of long-term performance-based maintenance contracts that are being successfully implemented in many developed and developing countries. Under the SLRP, RDMED has retained a consultant to carry out an in-depth assessment of road maintenance operations in Georgia. The consultant has started to review: (i) the strategy for the allocation of resources over the network; (ii) the planning and programming of the works; (iii) the contractual relations with the private sector and its effectiveness to achieve the desired output; (iv) the capacity of RDMED to supervise the works and the overall effect of road maintenance privatization on the serviceability of the network; (v) the role and performance of the newly created regional offices of RDMED; and (vi) the maintenance of local roads, including the impact of the Organic Law on LSG Units. The proposed project will supplement the funding available under SLRP and FEWHIP to implement recommendations made by the consultant.

Traffic Safety

18. ***Road traffic safety is now considered an important issue in Georgia.*** Road traffic safety is an issue that is beginning to gain the attention of the Government and the public[10]. The road traffic fatality rate in Georgia of 13 deaths per 10,000 vehicles in 2006 is significantly higher than in Eastern European countries, and much higher than the approximately 2 deaths per 10,000 vehicles in the more established European Union (EU) countries[11]. Road deaths and injuries have been increasing steadily in recent years. Since 2002 deaths have been increasing at around 6% per year and injuries at around 30% per year on average, but there has been a sudden increase in deaths in the most recent years. Between 2005 and 2006 traffic deaths have increased at 16% and injuries are increasing at 28% per year. Around 66% of the deaths occur in urban areas[12] and over 30% of those killed nationally are pedestrians, which is almost double the percentage of many West European countries[13]. The biggest growth amongst those killed on Georgian roads is occurring in the age group of 8-15 year old children where there has been a 117 % increase in deaths between 2005 and 2006. Besides emotional pain, traffic accidents have direct impact on a country's economic growth. The World Bank working paper "Road Safety in

[9] The Government is currently discussing with a potential investor the concession of about 120 km of the E60 Highway west of Tbilisi from Natakhtari up to Rikoti. Although the Bank is not a party to the contract, because the sections financed by the Bank are part of the proposed concession, it creates risks for the project which are discussed in the section III E of the PAD.

[10] The Georgian President's wife is promoting the wearing of seat belts by children. There is a recent United Nations (UN) sponsored road safety week in Georgia and a local NGO "Partnership for Road Safety Foundation" has been established which is promoting road safety.

[11] According to a 2004 unpublished World Bank working paper, fatality rates in other ECA countries were: Bosnia 3/10,000 vehicles, Croatia 5/10,000 vehicles, Russia 12/10,000 vehicles, Serbia 5/10,000 vehicles, Turkey 8/10,000 vehicles.

[12] Towns or built up areas along major roads.

[13] Germany 14%, France 11%, Sweden 14%, Netherlands 8%.

Individual ECA Countries" for 1999 suggested that the social economic costs of road traffic accidents for Georgia are approximately 1.1% of GDP. Preliminary estimates by the PHRD[14] funded consultants in 2007 indicate that economic losses are now at least US$100 million per year (around 1.4 % of annual GDP)[15].

19. ***Government has begun to address traffic safety problems*** For instance, the Patrol Police is now better equipped and thus more efficient, some main roads have been resurfaced, drunk driving law has been introduced and enforced, traffic monitoring devices are being installed in Tbilisi. However, there is much to be done. The upgrade of the E60 Highway paradoxically is expected to increase traffic fatalities. The improved highway allows cars to travel at higher speeds thus increasing accident severity. The Patrol Police have identified the main accident causes to be the poor condition of the roads and vehicles[16], the erratic behavior of pedestrians, and last but not least speeding, which is thought to be the dominant cause of accidents on the main roads. The Government now fully understands that the traffic safety situation is expected to become worse in the near future as Georgia[17] is about to enter the "explosive" phase of motorization, when very rapid growth occurs in numbers of vehicles resulting in more traffic crashes and casualties, unless effective mitigating actions are implemented. As part of the project preparation, a PHRD study on Traffic Safety has been carried out to review the current road safety situation in Georgia with the relevant authorities, identify selected priority activities and prioritize traffic safety investments and programs and develop and begin a program to improve road safety and raise awareness. The preliminary recommendation is for the Government to develop a comprehensive multi-sector approach involving the RDMED, Ministry of Economic Development (MoED), Patrol Police, Emergency and Rescue Services, Ministries of Heath and Education. The final report will be available for the Government review in early 2008, and the Government expressed its commitment to review carefully the consultant recommendations and to reflect its findings in a comprehensive multi sector road safety strategy for the country. Accordingly, this project will use the E60 highway as a demonstration and is the first step in a systematic program to address traffic safety by first improving the road engineering capacity at RDMED and assisting RDMED to improve traffic safety on the E60 Highway and other roads.

B. Rationale for Bank involvement

20. This Credit will continue the Bank support of the Government's priority of improving the E60 Highway which started with the FEWHIP approved by the IDA Board December 5, 2006 (Report No.35948-GE) and assist the Government to develop the beginning of a traffic safety program. The Government has decided to rehabilitate and reinforce the major transit corridor over the next 20 years for an overall estimated cost of approximately US$1.5 to US$2 billion. It has requested the Bank to take a leading role and a very significant share of this program. The KF is expected to finance the upgrade of a short section of E60 and JBIC is funding a feasibility study for the purpose of also supporting the E60 Highway. Other donors like Asian Development

[14] Japanese Policy and Human Resource Development grant.
[15] Early indications are that more detailed costing research (currently being undertaken in Georgia) will show annual losses to be significantly higher than US$100 million per year.
[16] E.g., tire blowouts during driving.
[17] with a motorization level of around 90 cars per 1000 population.

Bank (ADB) and European Bank for Reconstruction and Development (EBRD) are expected to contribute at a later stage.

21. Transport has been a Bank priority in Georgia since 1995. One of the first IDA credits was the US$12 million Transport Rehabilitation Project (FY96-99) under which over 50% of the proceeds were used in the road sector to fix the most urgent sections. It was followed by a US$40 million Roads Project (FY00-06) which financed basic repairs on the dilapidated main network. There is an on-going SLRP (FY04-10) which aims at addressing transport bottlenecks to rural development (US$20 million). In addition, the FEWHIP US$19 million (FY07 - 11) which became effective in March 5, 2007, upgrades from two lanes to four lanes the Agaiani to Igoeti section of the E60. The proposed Project would extend the upgrade from Igoeti to Sveneti, a segment of about 24 km. All of these projects also contributed to the strengthening of the institutional capacity of the sector.

22. The Country Assistance Strategy (CAS) Completion Report (for FY98-05) acknowledged the useful contribution of the Bank to Georgia road sector. At present, the Bank is the leading development partner engaged in the road sector, and therefore the Country Partnership Strategy (CPS) (FY06-09) describes IDA as the leader toward the development of the main highway network and includes this project. The Bank has in-depth knowledge and broad experience in the sector in Georgia and world-wide. The trust that results from this long-term involvement means that the Bank is in a good position to provide substantial assistance to the Government and RDMED. Development of the transit corridor in Georgia is also complemented by parallel investments along the same corridor in Azerbaijan, also supported by the Bank, as well as other donors.

C. Higher level objectives to which the project contributes

23. The Government's Economic Development and Poverty Reduction Program (EDPRP) emphasizes the importance of transport for the overall development of Georgia. In the most recent progress report (September 25, 2006), the Government identified the development of the transport infrastructure as a key objective. This would include improvement of road management capacity and the development of a multi-year investment and maintenance plan.

24. In the World Bank Group CPS for FY06-09 (Doc. No. IDA/R2005-0191[IFC/R2005-0215]), two of the three goals for the Government support are:

- Generating growth and job creation by removing barriers to private sector development and improving infrastructure, finance and markets; and
- Strengthening public sector management and budgetary processes to enable Georgia to better plan and meet its own development goals.

25. The proposed project supports the above priorities in two principal areas. First, by improving the road infrastructure in a heavily traveled section of the East-West Highway, the proposed project will directly contribute to economic development by reducing transportation costs and linking communities to Tbilisi, a center for employment and an outlet for agricultural products and commercial goods. Socio-economic surveys conducted in Georgia confirmed that rural populations felt that reduced transport costs and better connectivity would increase the

competitiveness of local produce, improve access to social services (i.e. schools and medical facilities), and offer employment opportunities. Improvement of road safety could also reduce the huge annual economic losses being sustained from road accidents and the resultant poverty amongst road accident casualties and their families[18]. In some cases, it could also spur tourism, which in the past was an important sector of the Georgian economy.

26. Second, the project will further the Government's priority to increase regional trade, develop a transit economy and encourage investment in growth sectors. High transportation costs (in terms of transit time, accident rates and vehicle wear and tear) within Georgia, add to the cost of inventory for goods in transit and the cost of goods and products produced in Georgia. A recent study examining the impact of road network quality on intra-regional trade in ECA identified Georgia as one of the countries with the poorest road infrastructure in the ECA region. Moreover, it was found that from the many factors expected to have an impact on the growth of foreign trade (e.g. tariff reductions, trade facilitation measures, or export/import time) road infrastructure improvements had the highest impact[19].

II. PROJECT DESCRIPTION

A. Lending instrument

27. The lending instrument proposed for this project is a Specific Investment Loan (SIL). The Loan type is an IDA Credit of US$35[20] million equivalent, IDA terms of 20 years maturity including 10 years grace.

B. Program objective and Phases

28. The Government stated that its immediate priority is to improve the country's highway network and has requested the Bank to finance a significant section of the E60 Highway upgrade. The proposed project is the second of the three projects (phases) slated in the CPS for a total of US$74 million to improve sections between Tbilisi and Poti on the E60 Highway - a part of Georgia's the East–West transport corridor. The US$74 million is split into: US$19 million in FY07 funding the FEWHIP; US$35 million in FY08 earmarked for the proposed SEWHIP project and US$20 million in FY09. The first Project for the section from Agaiani to Igoeti is under implementation with the first earthwork started in June 2007. This proposed second project is expected to be effective by February 2008 with construction activities commencing in early 2008. The third phase is targeted for approval in July 2008 (FY09) with the necessary funding to complete this project.

29. The Government would like the Bank to process the upgrade of the road section from Igoeti to Sveneti as one operation, with construction to start in spring 2008 in order to complete

[18] The involvement and impact of road crashes on the poor: Bangladesh and India case studies, Aeron-Thomas A, G Jacobs, B Sexton, G Gururaj and F Rahman, TRL, Crowthorne.

[19] Shepherd, Ben and John S. Wilson, *Road Infrastructure in ECA: Does Network Quality Affect Trade?* Final Paper, December 22 2006.

[20] There is expected to be an additional IDA credit in FY09 which would supplement the funding under SEWHIP as explained in section B. Program objective and Phases.

the construction of the new two lanes by end 2008 and rehabilitate the existing lanes in 2009. The IDA allocation for transport in the CPS is spread over 2 different IDA replenishment periods, making it impossible to process the SEWHIP in one single credit by front loading. To meet the Government's requirement to start the tenders in 2007 and sign the main contracts early 2008, the project (estimated US$80 million) is designed as a single operation financed as follows: IDA US$35 million, Georgia US$25 million and the remaining US$20 million would be financed either next FY through additional financing (as per OP/BP 13.20) subject to IDA availability and project good performance, or the Government would increase its cofinancing contribution to US$45 million. In view of the substantial road investment budget (GEL 269 million in 2007, i.e. about US$165 million), the non availability of the IDA additional financing in FY09 would not jeopardize the project viability and execution (furthermore, the funds would be needed for disbursement only in 2009).

C. Project development objective and key indicators

30. The project development objectives (PDOs) are:

(i) To contribute to the gradual reduction of road transport costs and improve ease of transit and safety along the central part of Georgia's East-West corridor, through upgrading a segment of the East-West Highway from Tbilisi to Rikoti; and
(ii) To strengthen the capacity of the government agencies (and particularly RDMED) to develop and implement a traffic safety program.

31. For road users, the project would lead to better road quality and level of serviceability, avoiding or deferring costly congestions expected on the basis of mid-term traffic projections, better road safety through new alignments and city bypasses avoiding hazardous crossing of urban areas by heavy transit traffic, and savings derived from shorter travel times. This project would also assist the Government to initiate a traffic safety program on E60 Highway, which could be rolled out and expanded.

32. **Key Indicators.** Project performance would be assessed through a number of qualitative assessments and quantitative indicators. The specified indicators would be regularly monitored and evaluated by the Ministry of Finance (MoF), MoED, RDMED, and the Transport Reform and Rehabilitation Center (TRRC[21]). The proposed indicators to be used to assess project performance are detailed in Annex 3 and include:

33. **Project Outcome Indicators**

- Reduction in transit time/vehicle operating cost from Igoeti to Sveneti
- National road safety action plan with targets and monitoring indicators devised and implemented

[21] "TRRC" means the "Eurasia Transport Corridor Investment Center"/"Transport Reform and Rehabilitation Center" Ministry of Economic Development of Georgia, established pursuant to Order No. N 119, dated April 16, 1995 as revised by President's Order No.161, dated April 21, 2000 and by President's Order No.1065, dated December 19, 2005, to assist in the implementation of transport sector projects, or any legal successor thereto.

34. **Intermediate Outcome Indicators**

- Number of km upgraded (2 lanes)
- Igoeti-Sveneti road segment built incorporating safety specifications
- New accident data system in place and data available and in use by key agencies to develop safety interventions in each sector
- Percentage of vehicle occupants wearing seat belts on E60 highway and in Tbilisi
- RDMED road safety unit strengthened
- Number of hazardous locations improved per year
- High level multi agency coordination body operating

D. Project components

35. **Component 1: Upgrade of the Igoeti to Sveneti section of the E60 Highway from two to four lanes including the construction of four bridges at Igoeti bypass (US$70.5 million):** This component comprises: (i) civil works for the construction of a new two lane carriage way along a 24 km section of the E60 highway from Igoeti to Sveneti between KP55 and KP79, the construction of 4 bridges to allow the crossing of a small and narrow valley and the Lekhura River at Igoeti bypass and the rehabilitation of the existing two lane carriageway; (ii) consultant services for the supervision of the works; and (iii) consultancy services for design[22] of another section of the E60 Highway to be specified by the Government at a later date to help prepare a future project. The construction of the new carriage way will mostly be within the right of way already owned by RDMED. About 9 hectares of land will need to be acquired for the construction of traffic interchanges and to connect the Igoeti bypass to the existing alignment by the Lekhura River. Land acquisition and resettlement costs would be financed solely by the Government.

36. **Component 2: Road Safety (US$2.13 million):** This component comprises works, specialized consultancy services, training, and equipment as needed to strengthen the capacity of RDMED to develop and implement a traffic safety program along the E60 corridor and other roads. It relies mostly on training qualified individuals in RDMED.

37. The road safety component will include engineering improvements in the E60, especially between Tbilisi to Rikoti, and other roads focusing on low cost safety measures (blackspots removal), supply and installation of guardrails in various location and features to provide better guidance (marking and signing) for road users. It also includes the development of safety management capability and capacity building in RDMED to deal with blackspots removal as well as developing new standards for road safety (marking, signing, traffic management, etc...).

38. **Component 3: Project implementation (US$0.72 million):** The component will fund consultant services for TRRC[23], project audits and will finance incremental operational costs to support implementation of the project.

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[22] The Government would however prefer that the design is financed by IDA via a grant like in the Infrastructure Pre-investment Facility (IPF). If this happens the unused amount would be reallocated to other project components.

[23] TRRC's assistance to RDMED is funded under the on-going FEWHIP. The proposed project will supplement FEWHIP funding when necessary or for activities specific to the new project and not covered under FEWHIP and

39. The total project cost for all components is US$80 million, which includes an unallocated amount of US$6.65 million to cover contingencies.

E. Lessons learned and reflected in the project design

40. The following lessons learned from the Bank's experience in similar projects in the region and particularly from the previous road projects in Georgia have been incorporated into the design and preparation of the project:

41. **Ensure client ownership of the institutional components.** The institutional components of projects have often fallen short of achieving their objectives. Local conditions, such as counterpart absorptive capacity and ownership have been important factors. The scope and timetable of these components have often also been overly-optimistic. RDMED has a demanding construction program and its attention and recourses are tapped in the road investment and rehabilitation program. The Government is committed to traffic safety. After review of the study financed by the PHRD, the Government intends early 2008 to reflect, as appropriate, its findings in a comprehensive strategy. The institutional component of the proposed project focuses on a few issues essential for RDMED to improve traffic safety along the E60. The component will be monitored against clear indicators and targets tailored to the on-ground situation in Georgia. The appraisal of the next Highway project will be depending on the progress made by the Government on its national traffic safety program.

42. **Avoid design changes and variations during construction.** Because the technical complexity of highway construction is often underestimated, many projects of this type experience substantial cost overruns and construction delays. To address these risks, RDMED is implementing a phased approach to road construction, with each phase to be supported by an interactive process in designing alignment alternatives, assessing technical, environmental and social impacts and cross-validating design results with engineering firms and other experts. In addition, former Soviet Union design standards often lead to oversized up-front investment. The proposed project addresses this risk by requiring modern European design standards to be applied where appropriate and benchmarking the investment against similar operations in similar countries.

F. Alternatives considered and reasons for rejection

43. Various alternatives, both technical and financial, have been considered for this project.

44. The Bank considered whether the Igoeti bypass should be included in the proposed project or postponed for a later date. Although, the Igoeti bypass is economically justified, the construction is costly and based solely on Vehicle Operating Cost (VOC) and time savings, yields a lower Economic Internal Rate of Return (EIRR) than upgrades of some other sections on the E60. The postponement option was rejected because: (i) delaying the investment on this section would create a singularity along the itinerary which would likely generate higher traffic

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cover TRRC's services when the implementation of FEWHIP is completed. The compensation package is monitored by RDMED.

accidents, costs of which are not taken into account in the EIRR, (ii) the social impact of compressing four lanes of traffic to a two lane road through the Igoeti village is negative and not accounted for in EIRR, and (iii) the Government wanted a sequential upgrade of the Highway from outside of Tbilisi to Rikoti.

45. The Bank weighted the benefits and the risks of including the traffic safety component in the proposed Project. There are some implementation risks (see discussion later) as there is at present a limited awareness of the adverse impact of traffic accidents and fatalities to the Georgian economy, and that championship for traffic safety issues is difficult to develop as the solutions involve various disparate entities[24]. The decision to include the traffic safety component has been made because the accident rates in Georgia are very high compared to countries with similar economic development and motorization, and the country is incurring at least US$100 million of economic loss per year (1.4 % of annual GDP in 2006) as a result of traffic accidents. The upgrade of the E60 will change traffic accident patterns with less head-on collisions, but more serious accidents as cars travel at higher speeds. Anecdotal evidence indicates that since the opening of the upgraded Natakhtari to Agaiani, traffic fatalities on that section have increased instead of diminishing. Given IDA is financing the upgrades of the E60 Highway through FEWHIP and this Project; it is incumbent on the Bank to mitigate the potential negative impact of these investments.

46. The Bank also considered splitting SEWHIP into two projects as IDA funding for this FY is inadequate to cover the entire project's costs assuming a 30% cofinancing from the Government. The first project would be the construction of the two new lanes and the four bridges at Igoeti bypass and the second project would rehabilitate the existing carriageway. However, to split the SEWHIP into two projects would be artificial and the construction of the two new lanes would be meaningless without the rehabilitation of the existing carriageway which is an integral part of the improvement. Moreover, it would also be inefficient for the procurement of the works. Currently there will be two works contracts: one for the bridges and the other for the road. Otherwise, the road works would have to be split into two contracts and most probably two contractors, creating coordination problems and additional cost for contractor mobilization. Therefore, the Bank decided to present SEWHIP as a single project financed as follows: IDA US$35 million, Georgia US$25 million and the remaining US$20 million would be financed either next FY through additional financing (as per OP/BP 13.20) subject to IDA availability and project good performance, or the Government would increase its cofinancing contribution to US$45 million. In view of the substantial road investment budget (GEL 269 million in 2007, i.e. about US$165 million), the non availability of the IDA additional financing in FY09 would not jeopardize the project viability and execution (furthermore, the funds would be needed for disbursement only in 2009).

[24] RDMED, patrol police, first aid and trauma units, vehicle licensing, driver's education and testing, road safety education.

III. IMPLEMENTATION

A. Partnership arrangements

47. There is a coordinated approach of donors in the transport sector in Georgia. The Bank has organized donors' conferences co-chaired with the MoED to discuss various transport issues.[25] The conferences are opportunities for the Ministry to update donors on the state of the transport sector, main needs, Government priorities and on-going and planned transport projects. They also allow the donors to discuss their transport activities in Georgia and informally coordinate. The agreement is that the donors' meetings should be arranged about twice a year and the organization of the meetings will be coordinated between the Government and the World Bank.

48. The Bank is also coordinating closely with other donors (including the ADB, EBRD, European Investment Bank (EIB), European Commission, Kreditanstalt fur Wiederaufbal (KfW), JBIC, Organization for Security and Cooperation in Europe, TRACECA, and the French Government) on transport issues in the South Caucasus. It appears that several donors are actively looking to be more involved in the Georgia's transport sector[26].

B. Institutional and implementation arrangements

49. The Financing Agreement (FA) will be established between IDA and Georgia. The Project will be implemented by RDMED, with assistance from TRRC, established in late 1995, to assist in the implementation of the IDA-financed Transport projects. The main function of TRRC will be to provide support to the implementing agencies in procurement, accounting, disbursements, financial reporting, auditing arrangements, project monitoring and evaluation and coordination with the World Bank and other financiers. TRRC has experience in managing and implementing six IDA-financed transport or transport-related projects and has already established a successful track record in its implementation of these projects. RDMED recently has become more involved in procurement issues and is progressively taking over from TRRC the procurement function. Procurement and Financial Management (FM) practices by TRRC are determined to be in accordance with the World Bank guidelines. TRRC will work with both the Treasury service of the MoF and the Central Bank in the administration of the Designated Account (DA) and with the MoED and RDMED to implement this project.

50. There are no significant weaknesses identified in TRRC. However, TRRC needs to update its Financial Management Manual (FMM) before the start of implementation to reflect the specific activities of the new project with the relevant Chart of Accounts to be enclosed.

51. RDMED and TRRC will sign an amendment to the existing Implementation Support Agreement spelling out their respective roles and responsibilities.

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[25] Participants in these conferences include the Millennium Challenge Corporation (MCC), United States Agency for International Development (USAID), JBIC, Department for International Development (DFID), Embassy of France, and Embassy of the Netherlands. Other donors such as ADB, EBRD were invited but as yet have not been able to attend.

[26] JBIC representatives were in Georgia in August 2007 to explore possibility of supporting the improvement for the E60 Highway.

C. Monitoring and evaluation of outcomes/results

52. Project monitoring during the course of project implementation will be carried out by RDMED with the assistance and guidance provided by TRRC and also under close supervision from MoED. Quarterly reports on implementation progress will be submitted to IDA by RDMED within 45 days after the end of each project quarter. Annual reports will be submitted to IDA by RDMED within 60 days of end of each project year. The reports will be supplemented by regular supervision missions monitoring project implementation.

53. There will be a Mid-Term Review of the project in the second half of 2009 where special attention will be paid to: (i) the status and the operation of the Traffic Safety Council or similar high-level inter-agency coordination body and the development/implementation of a national road safety action plan, and (ii) the implementation progress of the various traffic safety sub-components.

D. Sustainability

54. Project sustainability will largely depend on the Government's: (i) commitment to the improvement in the east-west transit corridor and the continued availability of resources; (ii) commitment to address traffic safety issues; and (iii) ability to develop an inter-ministerial body that has cross sector institutional responsibility for traffic safety.

55. The first concern is addressed by the high priority the Government has placed in developing the transport sector, evidenced by the significant increase in budgetary support provided for the road sector for both maintenance and new investments. In addition, the Government has a plan to complete the upgrade of the E60 from outside of Tbilisi to after Rikoti Tunnel in the near future. There are also other donors funding to continue the highway improvements. The Government is committed to funding the maintenance for the Georgia road system and this will be closely monitored.

56. Sustainability of the traffic safety component depends on the project's success in raising the political and public awareness of the huge losses to the national economy resulting from road accidents, the demonstration of cost effective approaches to improving road safety, and on the Government's willingness to build accountability and capacity in relevant ministries. The sustainability of physical works will require that road safety audits and blackspots identifications and treatments become an integral part of RDMED regular activities. It will depend on ensuring adequate staffing and training of RDMED safety unit. Finally, the Government's commitment to developing and monitoring a long term national safety strategy and to funding road safety initiatives will be needed.

E. Critical risks and possible controversial aspects

57. Given the Government's priority for a speedy project implementation, there is a low to-medium risk of failure to implement in a timely manner. There are other risks to attain the development objectives and potential controversies:

H – High S – Substantial M – Modest L – Low

Project risk	Risk rating	Mitigating factors	Residual risk
Weak institutional capacity to implement the project. RDMED is just starting to implement large highway projects so there will be a very steep learning curve to properly implement engineering and construction projects of such a scale. TRRC has had significant staff turnovers[27] in key positions; the new staff is not yet familiar with the Bank procedures and working with RDMED.	S	This risk is mitigated by the Bank's hands-on guidance during supervision and the project providing adequate funding for consultants to design[28] and supervise the works. The improved salary levels also allow RDMED to hire the needed expertise. TRRC is currently working on improving the quality of its work. RDMED has also recently assumed more ownership in procurement matters. This is a positive development.	M
Merging of TRRC within RDMED. Overall, TRRC has a good track record of implementing of Bank transport projects since 1996. The Government stated its intention to integrate all Project Implementation Units into the respective Ministries. MoED, RDMED and TRRC are satisfied with the current arrangement, although the move of RDMED into the same office building as TRRC could evolve into a de facto integration of TRRC into RDMED which, if not done properly may jeopardize procurement and FM capacities.	S	In any case, the move should lead to closer and better coordination between RDMED and TRRC. As has been the case for previous projects, RDMED and TRRC will sign an amendment to the existing Implementation Support Agreement for this Project satisfactory to IDA with the Bank to receive adequate notice if this implementation arrangement is to be changed.	M
Efficiency and transparency in highway procurement. The principal component for this project, in terms of dollar amount, will consist of two large contracts for works.	S	The tendering for these E60 contracts will attract international companies and should be competitive. With the presence of a Bank procurement specialist in Tbilisi, the residual procurement risk for this IDA transport project is limited and manageable.	M
Misuse of funds. While the country corruption risk is improving constantly but remains an area of concern[29], the specific corruption risk for this project is moderate as a result of the mitigation measures applied.	S	These mitigation actions are: (a) the project will establish a formal internal control framework (in the FMM); (b) funds flow mechanism will be enforced; (c) the project financial statements (PFS) will be audited by independent auditors and on terms acceptable to the Bank; (d) regular FM supervision and procurement prior and post reviews will be conducted.	M
Counterpart funding. The Government is co-financing about 30% of the project costs including taxes. Currently, the IDA funding for this project is spread over two different IDA replenishment periods. While additional IDA allocation is expected for FY09, it is not fully guaranteed.	M	The counterpart funding risk is mitigated somewhat by the rapid growth of the Georgian economy and the Government's strengthening fiscal situation evident by its ability to withstand recent economic shocks such as the increase in energy costs and the imposition of trade restrictions. The	L

[27] Partly due to improved employment opportunities in Georgia.
[28] Road designs are funded under the IDA IPF.
[29] According to the recent Business Environment and Enterprise Performance survey report, the corruption in Georgia has significantly decreased compared with 2002, and in 2005 was below all the average indicators on the CIS and ECA.

Project risk	Risk rating	Mitigating factors	Residual risk
The Government has to tender all the works contracts in 2007 so activities can commence in 2008. The Government will have substantial financial liabilities if IDA funding for FY09 becomes unavailable for whatever reason.		government's fiscal situation is bolstered by inflows of foreign direct investment, private capital flows, and donor assistance. Given the priority of the E60 upgrade, the Government should be able to tap its financial resources to provide adequate counterpart funding if the IDA FY09 allocation does not materialize.	
Technical risk. SEWHIP is technically much more complex. The preliminary design for the proposed Project was completed as a part of the FEWHIP and the detailed design is now completed. It involves the construction of Igoeti bypass requiring the building of four bridges (90 m and 180 m respectively) – construction of which were started in Soviet period and stopped after independence because of lack of funds. A technical assessment has been done on the conditions of the existing piles and abutments.	S	This risk is mitigated by the fact that the consultant in charge of the detailed design has worked extensively in Georgia and with the Roads Department, is technically competent for the assignment and the necessary testing of the structure is included as a reimbursable in the contract to avoid any shortcoming. Furthermore, the Bank team would seek the expertise of an additional bridge engineer if the need arises.	L
Environment and social safeguards risk. The Environmental Management Framework (EMF) identifies the Igoeti bypass as sensitive. As for social issues, the new project will require more land acquisition and resettlement than the FEWHIP as the alignment will affect several small villages and isolated kiosks and buildings which will have to be demolished and resettlement provided. Roads Department endorsed the Resettlement Policy Framework (RPF) that includes a set of mitigation and procedural measure but might not be entirely convinced that occupants, especially illegal ones, of public land need to be compensated as per Bank policy. Furthermore, given the political pressure on the Roads Department to deliver quickly, procedural requirements of the RPF might not be strictly observed.	S	The proposed Project has been classified as a Category A project for environmental assessment purposes. The consultant stated nonetheless that no 'showstoppers' were identified, and that the impacts at Igoeti were manageable through the application of conventional mitigation measures. The consultants developing the EMP and Resettlement Action Plan (RAP) have almost completed their work and have been asked to focus on these matter and issue clear guidelines to mitigate the risks and to suggest close monitoring mechanisms. RDMED is taking land acquisition and social issues seriously and have recently established a land acquisition team within RDMED to oversee the social safeguard issues. RDMED has also hired an environmental specialist to work with the Bank and the consultants.	M
Concession of the Highway The Government is currently discussing with a potential investor the concession of about 120 km of the E60 Highway west of Tbilisi from Natakhtari up to Rikoti. The potential investor(s) and content of the concession agreement are still uncertain thus creating a risk for the Bank (in term of being associated with an investor currently unknown) and for the Bank financed section (in term of sustainability of the project).	S	The Bank and the Government are in constant dialogue and the Bank conveyed to the Government the key issues to be incorporated in the concession agreement to ensure the sustainability of the project. The Bank is also carrying out its due diligence regarding the potential investors and would inform the Government if an issue would arise with one of the investors. To further mitigate this risk, the Bank and the Government agreed at negotiations to add an Additional Event of Suspension allowing the Bank to withdraw if it was not satisfied with the proposed concession arrangement.	M

Project risk	Risk rating	Mitigating factors	Residual risk
Implementation risk for traffic safety component. This is not the first attempt by the Bank to raise the importance of traffic safety in Georgia. A small traffic safety study was carried out in 2003 as a part of the TA for the (closed) Roads Project (FY00 – 06). Only a few recommendations were implemented. A PHRD grant of US$440,000 was approved to assist in the preparation for the proposed project, to conduct an in-depth traffic safety study with a focus on the E60 Highway. However RDMED (which is overwhelmed by its huge road program to deliver) showed little enthusiasm (and legitimacy, RDMED views leading a multi-sector traffic safety study as outside of its mandate) to carry out the implementation of the grant and the MoED took over implementation which was much delayed.	H	Although the project only focuses on supporting RDMED, it is part of a holistic approach expected to be adopted by the Government early 2008 after the completion of the PHRD funded study. This approach is needed to reduce traffic accidents and its severity by involving the Police and other key government agencies that cover education, vehicle inspection, signage, seat belt law enforcement, blackspot removal, first aid and medical services, private car insurers and others. The linkage between the progress of the Government in developing a road safety policy and the Bank next project reduce this component's implementation risk which is rated substantial	S
Project Overall Risk	**S**	**Project Residual Risk**	**M**

F. Loan/credit conditions and covenants

58. The following conditions and covenants have been agreed with the Government during negotiations.

59. **Conditions for Effectiveness:**

(i) RDMED and TRRC have signed an amendment to the existing Implementation Support Agreement spelling out their respective roles and responsibilities.

60. **Financial Covenants:**

(i) No later than March 31, 2008, TRRC shall have appointed an independent auditor under Terms of Reference (TOR) acceptable to IDA.

(ii) RDMED, through TRRC, shall maintain a financial management system acceptable to the Bank. The project financial statements, Statements of Expenditures (SoEs) and DA statement will be audited by independent auditors acceptable to the Bank and using TOR acceptable to the Bank. The annual audited statements and audit report will be provided to the Bank within six months of the end of each fiscal year. Acceptable auditing standards are International Standards on Auditing (ISA).

(iii) RDMED, through TRRC, shall prepare and furnish to the Bank quarterly Interim Un-audited Financial Reports (IFRs), in form and substance satisfactory to IDA. The first IFR shall be furnished to the Bank no later than 45 days after the end of the first calendar quarter after the Effective Date and shall cover the period from the occurrence of the first expenditure under the Project through the end of the first

calendar quarter. Thereafter, each IFR shall be furnished to the Bank no later than 45 days after each subsequent calendar quarter.

61. **Project Covenants:**

(i) RDMED, through TRRC will submit to IDA semi-annual progress reports, in a format satisfactory to IDA, not later than 45 days after the end of each semester outlining the progress made in the implementation of the Project, as well as the problems encountered and how they are to be addressed.

(ii) RDMED will implement the Environmental Management Plan (EMP) developed in accordance with the environmental screening and OP/BP 4.01 Environmental Assessment (EA), and prior to the start of the civil works on a particular section, RDMED will implement a Resettlement Action Plan (RAP) developed in accordance with the Resettlement Policy Framework (RPF) and OP 4.12.

(iii) An additional event of suspension has been included, namely that the Borrower shall have failed to notify, and provide adequate information to the Association before entering into a concession agreement for the operation and maintenance of the East West Highway financed under the project or the Association shall have raised objections to the Recipient entering into such agreement.

IV. APPRAISAL SUMMARY

A. Economic and financial analyses

Economic (Cost-Benefit) Analysis:

Improvement of Igoeti-Sveneti section:	EIRR = 15.3%; NPV = US$ 10 million
Construction of Igoeti Bypass:	EIRR = 13.3%; NPV = US$ 1.5 million

62. The economic analysis covers the main component of the project: the upgrade from two to four lanes of the 23 km highway between Igoeti to Sveneti, construction of Igoeti bypass (2.5 km), and rehabilitation of 2.7 km existing local road in Igoeti village. The principal benefits of the project are savings in vehicle operating costs resulting from increased capacity and improvements of pavement roughness and road design, and savings in travel time resulting from diverted traffic to the new bypass. The economic analysis, prepared by consultants as part of the project feasibility study and revised and updated by RDMED, is based on the use of the World Bank HDM 4 model. Project costs exclude taxes and duties. Traffic levels are based on traffic counts carried out every six months by RDMED. Origin-destination surveys carried out by the consultants in charge of the feasibility study show that freight traffic (about 12% of the total traffic) can be divided into local, foreign and transit (77%, 13% and 10% of total freight traffic, respectively). Traffic forecasts for each type of traffic were based on specific relevant parameters (e.g., consumption and GDP per capita and population growth for passengers, GDP growth for local freight traffic, projected growth of Georgia's exports and imports for foreign traffic, and estimated growth of the imports of the Central Asian countries which account for 93% of the transit traffic). The economic evaluation of Igoeti-Sveneti section resulted in a satisfactory EIRR of 15.3%, while the estimated rate of return for the construction of the Igoeti bypass is 13.3%, and for the rehabilitation of the local two-lane road in Igoeti is 12.9%. The

latter was based on origin-destination surveys which estimated that 90% of the total traffic will be diverted to the bypass.

63. The results of the sensitivity analysis show that a 20 percent increase in the cost of the civil works would result in a reduction of the EIRR for the upgrade of the 23 km Igoeti-Sveneti road section to 15.2%, the EIRR for the construction of the Igoeti bypass to 10.9%, and that for the rehabilitation of the existing two lane road in Igoeti to 11%. A reduction of benefits by the same ratio would result in an EIRR for the upgrade of the Igoeti-Sveneti section dropping to 10.9%, the construction of Igoeti bypass EIRR to 3.6%, and that for the rehabilitation of the existing two-lane Igoeti road to 8.2%. In the unlikely scenario of a substantial decrease in the expected traffic growth, the construction of the by-pass would become a few years premature. Details of the economic evaluation are presented in Annex 9 and the complete economic evaluation has been entered into the project files.

B. Technical

64. The project aims at constructing two additional lanes along a 24 km long section of the E60 East-West Highway from Igoeti to Sveneti including the Igoeti bypass and rehabilitating the existing two lanes. The E60 traverses from Red Bridge (Azerbaijan/Georgia border) through Tbilisi to Poti at the Black Sea.[30] The project comes as a continuation of the efforts currently deployed by the Government to upgrade the E60 corridor from Tbilisi up to the Rikoti tunnel (about half of the way to Poti on the Black Sea) to a dual carriageway. This investment was already foreseen in the 1980's; some works were started under the Soviet era and provisions were made to ensure there is sufficient Right of Way for the construction. A pre-feasibility study was financed under the Infrastructure Pre-Investment Facility (IPF) Project. The detailed design study also funded by IPF started in March 2007 is conducted in parallel with the environmental and social studies. Both studies were completed by the end of September 2007 and the Bidding Documents are being finalized.

65. Georgia has experienced seismic activities with earthquakes registering magnitudes up to 8 on the Richter scale[31]; the design shall take this constraint into consideration with particular attention to specifications for bridges. Design standards for all the investments are well established by reputable consultants and there are plenty of quality contractors to carry out the works. No trial or experimentation is involved and there are no risks related to technology, design or installation, and future maintenance of the roads.

66. The construction of the Igoeti bypass should not present a real challenge to the engineers, but it will require careful detailed design[32]. Procurement for the works will be based on a rigid

[30] Feasibility and phasing of the works were analyzed through various studies financed inter alia by EU-TRACECAand PPIAF.

[31] The strongest earthquake was on April 29, 1991, with 8 on the Richter scale with epicenter in Oni (Georgia). The most recent strong seismic activity in Georgia was on April 25, 2002, with epicenter in Tbilisi with scale 7.

[32] First it was necessary to assess whether the structures that were partly built during the 1980s (i.e., the foundations and the piles of a 200 meters viaduct, and the retaining wall) could be reused. The review of the existing foundations and piles of the bridge was carried out. All but two piles could be repaired. There are two parameters that lead to this conclusion: (i) the superstructure that will constitute the deck of the bridge will be much lighter than the structure that was envisaged initially, using a more modern, steel-based technology, and (ii) the compressive

structure (concrete) for the construction of the pavement and will be divided into two contracts (one contract for the construction of new two lane carriage way and rehabilitation of the existing two lanes along the 24km, and one contract for the four main bridges at Igoeti).

C. Fiduciary

67. A Country Fiduciary Assessment was carried out by the Bank in close collaboration with the Georgian Government in 2007 to assess all aspects of risks (institutional, political, procedural etc.) that may negatively affect the abilities of implementing agencies to carry out procurement in Georgia. The new Georgian Government has carried out a considerable number of reforms aimed at introducing elements of openness, fairness and transparency in the Georgian procurement environment, however, the associated draft report (Country Procurement Assessment Report) still rates Georgia a high risk country.

68. An assessment of the procurement capacity of the implementing agency to carry out customary procurement functions in compliance with Bank policy and procedures has been carried out. RDMED has been encouraged to speed up its efforts to build its own capacity in Bank-financed procurement. The findings from the review are being discussed with the implementing agency as well as recommendations as to how to deal with weaknesses and risks encountered. All larger procurement activities for this operation will be monitored by a procurement specialist working in the Georgia Country Office.

69. The FM functions of the project will be handled by RDMED through TRRC, which will be responsible for the flow of funds, accounting, reporting, and auditing. The FM arrangements of TRRC have been reviewed periodically as part of the on-going projects supervisions and have been found satisfactory. An assessment of the FM arrangements for the SEWHIP was undertaken in April 2007 during the FM supervision of the on-going projects and was based on the recent FM assessment of FEWHIP. The FM arrangements of the project are going to be same as for the FEWHIP that are acceptable to the Bank. The overall FM risk for the project before mitigation measures is moderate and after mitigation measures, the risk is low.

70. Since January 2006, the Treasury's foreign currency sub-account at the National Bank of Georgia (NBG) has been used for all new World Bank financed projects' DAs. Overall these arrangements have been satisfactory with some improvements to be made. Therefore, they will remain in place during this project implementation.

71. Hence, the overall residual fiduciary risk for this project is now deemed moderate and manageable.

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strength of the concrete of the existing piles has not been altered. Second, a large landslide (about 300,000 m^3) occurred after the works that were carried out in the 80s. It was necessary to design a new project with larger earthwork and mitigation measures. Geotechnical investigations were completed, and the project was designed using the same alignment that the one foreseen initially, but with larger earthwork and longer and higher retaining walls. Lastly, the engineers had to accommodate two large water pipelines (*1.2meters diameter each*) that will have to cross the bypass, underneath the platform. The two pipes will stay at the same location where they are positioned now, and will remain on the side of the platform and fully accessible to maintenance teams. The rest of the 24 km section of the E60 does not present major difficulty from an engineering point of view.

D. Social

72. The proposed Project will require the acquisition of about 9 ha of land, of which 7 ha belong to about 95 private owners. No physical relocation is expected under the project, although some part of residential plot will be acquired. A handful of kiosks and other commercial entities will be demolished.

73. The RPF, prepared last year under the IPF, covers the section of the road that will be built under this project[33]. The Georgian legal framework on land acquisition was assessed and found to be in line with OP 4.12, except that those owners without full ownership rights, as defined under the Land Code, are not entitled for compensation, even though they have received titles from the state at the time of land privatization. Also, under the Georgian legislation, loss of income or assets of commercial entities without business license will not be compensated.

74. The RPF stipulates that RDMED will provide compensation at replacement cost sufficient to restore pre-project livelihood to all project affected people (PAP) without regard to the legal status of property ownership or commercial activities. The RAP prepared for the FEWHIP indeed provides that compensation be provided to all PAP without regard to legal status. Also, kiosks and other commercial entities that operate without license will be provided alternative space in the rest areas that will be established, so they can continue with commercial activities.

75. The RAP for SEWHIP is under development and will, like under the FEWHIP, define compensation to the PAP as per policies and procedures set out in the RPF and OP 4.12. Further consultation will be carried out as part of the development of the RAP, and feedback will be incorporated into the RAP. A Notice board will be put up to inform local populations of the project and a communication channel will be set up to allow those with competing claims over land to put forward their claims.

76. Acquisition of private land and implementation of the RAP will be carried out by RDMED. The capacity of RDMED in resettlement planning had been significantly strengthened during the implementation of the FEWHIP. A consultant hired under the TA program of the FEWHIP has been supporting RDMED in the implementation of the RAP.

E. Environment

77. The proposed project has been classified as a Category A project for environmental assessment purposes. Some significant environmental issues are anticipated in accordance with the World Bank's safeguard policies and procedures, including OP/BP/GP 4.01 *Environmental Assessment*. An Environmental Review of baseline information, key environmental sensitivities and an analysis of alternatives was conducted for both projects - FEWHIP and SEWHIP - to assist in planning and scheduling. The Environmental Review also identified mitigation measures. A Specific EA and an EMP to mitigate and manage direct or indirect impacts of construction under this project have been prepared as well.

[33] A public consultation meeting was carried out during preparation of the FEWHIP in Agaiani, Okami and Berbuki on October 19, 2006 to discuss the RPF.

78. The Environment Review concluded that there are no protected areas crossed by the Project. However, areas surrounding Igoeti bypass represent a habitat for several endemic floral species that are entered in the Red List and Red Book of Georgia[34] (Law of Georgia on *the Red List and the Red Book of Georgia*, dated June 6, 2003, as amended on July 18, 2006). Sensitivity of these terrestrial and aquatic habitats to project impacts is estimated to be medium, but they could be vulnerable to a variety of construction activities and to operation of the rehabilitated highway unless proper mitigation measures are taken. Specific measures for managing and mitigating the potential impacts during construction and operation of Igoeti bypass and Igoeti-Sveneti section of the highway will be identified and recommended through the EMP in line with OP/BP 4.04 Natural Habitats.

79. In terms of impact to vegetation, in the vicinity of the village Igoeti and along the Igoeti-Sveneti section of the road there are fragments of riparian forests that are protected under the Forest Code of Georgia. Specific measures for managing and mitigating the potential impacts during construction will be identified and recommended through the EMP in line with OP/BP 4.36 Forests.

80. Plants in the strip of greenery that align the road are expected to be impacted during construction and the number of parasites and diseases may increase due to a decrease in plant resistance during construction. Highway construction could also lead to a spread of pests, parasites, diseases, weeds, or harmful microorganisms to adjacent orchards, crops, wind breaks, or fragments of woods without proper management. Mitigation and compensation measures will, therefore, be developed and outlined in the section specific EMP in line with OP 4.09 Pest Management.

81. Several areas around Igoeti bypass and sections of the existing road carry high risk of geo-hazards due to landslide bodies formed on the steep slopes. At one point in the Igoeti to Sveneti section, the flow of the western Tortla River is very close to the existing road. The road slope is not properly reinforced and carries a risk of collapse. The proposed project is in immediate proximity to important archaeological sites and monuments[35]. The EMP currently under preparation will outline measures to avoid and/or minimize project impacts on identified cultural properties and will include procedures for managing chance finds during construction works.

82. The Environmental Review has been disclosed through the InfoShop (September 14, 2006) and in country (September 15, 2006) and consultation meetings were held in Agaiani, Okami and Berbuki on October 19, 2006 to discuss the Environmental Review. The final Environmental Review was disclosed on October 23, 2006. The project specific EA and EMP were submitted to the Bank on August 15, 2007. These documents were disclosed in Georgia

[34] The law of Georgia on *the Red List and the Red Book of Georgia* defines the Red List as a list of animal and plant wild species that are endangered in the territory of Georgia, and defines the Red Book as a document containing data on the status, distribution area, habitats, numbers, spawning areas and conditions, and risks for the species entered into the Red List.

[35] Nine of which have been identified during the desk-studies and site visits around village of Igoeti and ten more along the Igoeti-Sveneti section of the road.

(September 14, 2007) and published through the InfoShop (September 19, 2007). Stakeholder discussions were held in two convenient locations along the highway route on September 18 and 20, 2007. After incorporation of comments received from the stakeholder groups and from the Ministry of Environmental Protection and Natural Resources of Georgia, the final EA and EMP were shared with the Bank on September 28, 2007.

83. The MoED through RDMED, assisted by TRRC, is responsible for the successful implementation of the EA studies. Specifically, the Ministry, through TRRC/ RDMED, will ensure that: (i) Georgian and the Bank policies on environment and social protection are followed; (ii) consultation with the public, as needed, takes place; (iii) information is disclosed to the public, as needed; and (iv) information, as needed, is provided to the Bank on environmental matters. Within RDMED, the Division of the Project Analysis, New Technologies, and Environment Protection under the Office of Technical Policy is responsible for all environmental issues related to highway development. An environmental specialist has been recently hired and RDMED is also developing environmental capacity of its existing staff. RDMED is benefiting from a TA contract implemented under FEWHIP which provides on-the-job training and capacity building in the environmental and social fields.

F. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[X]	[ ]
Pest Management (OP 4.09)	[X]	[ ]
Physical Cultural Resources (OP/BP 4.11)	[X]	[ ]
Involuntary Resettlement (OP/BP 4.12)	[X]	[ ]
Indigenous Peoples (OP/BP 4.10)	[ ]	[X]
Forests (OP/BP 4.36)	[X]	[ ]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP 7.50)	[ ]	[X]

G. Policy Exceptions and Readiness

84. The Project complies with all applicable Bank policies. The engineering design documents and the bidding documents for the first year's activities are complete and ready for the start of project implementation. The contracting for the major work contract is ongoing.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.*

Annex 1: Country and Sector or Program Background

GEORGIA: Second East-West Highway Improvement

General Background

85. Georgia is a small country located to the south of the Caucasus mountain range, with Russia to the north, Armenia and Turkey to the south, Azerbaijan to the east, and the Black Sea to the west. It has a population of 4.5 million[36]. Following independence in 1991, the loss of planned production for Soviet markets, the end of large budget transfers from Moscow, and the impact of civil war and ethnic conflicts which displaced some 300,000 people, output dropped by more than 70%. The official GDP in 2000 was only 30-35% of its 1989 level[37]. GDP and GNI per capita have increased significantly in the past few years. However, the country's GNI per capita of US$1,560 in 2006 is still one of lowest among lower middle-income countries.

86. ***The Rose Revolution was a defining moment for Georgia.*** Although a range of political and economic reforms were implemented following independence in 1991, the situation quickly worsened afterwards. By the early 2000's, power had fragmented among competing groups, law and order had deteriorated, corruption was widespread; public salaries, pensions, and social transfers were in arrears, and the political will for reforms had slackened. The Rose Revolution in late 2003 brought into office a government of reformers led by President Saakashvili. His administration has been implementing bold reforms to fight corruption, reduce the burden of the state on the economy, move the energy sector towards efficiency and sustainability, lay down the basis for improved employment and standards of living of Georgians, and develop a fiscally-sustainable social safety net. The authorities describe their reform orientation as strongly pro-market have been drawing inspiration from countries such as New Zealand (on state reform), Ireland (de-regulation) and Estonia (social sectors).

87. ***Progress over the last several years has been substantial.*** In the public sector, salaries and pensions are paid on time and arrears have been cleared. Public employee salaries have increased significantly. For instance, the salaries of RDMED have increased substantially and are now more or less on par with the salary level in the private sector. For the private sector, the regulatory and administrative environment facing business has improved significantly. The World Bank's 2006 and 2007 Doing Business Reports rated Georgia among the top reformers, and in the latest Report for 2008 Georgia moved to 18th place in the rankings. Various indicators show a marked decrease in corruption. Investments in infrastructure have been substantial, particularly for roads and energy, with major improvements in access to reliable electricity services. At the same time, the popularity of the Government has suffered since the Rose Revolution, in part because while economic growth has generated new jobs, it has not yet been sufficient to offset labor shedding and therefore net unemployment has not reduced. Continuing the upsurge in private investment and growth will therefore be very important in the years ahead. Other challenges include the need to pay greater attention to institutionalizing reforms to ensure their sustainability, rising prices, protection of property rights and slow

[36] This number does not include population of South Ossetia and Abkhazia.
[37] Although the (large) shadow economy was estimated to be up to 33% of GDP.

progress in judicial reforms and strengthening the rule of law. Finally, there has been a perception within civil society that the Government places insufficient emphasis on consultations and consensus building in pursuing its reform agenda. The Government has therefore decided to advance Presidential elections from November to January 2008, as an opportunity to test the extent of its mandate to pursue its current priorities and development strategy. Development of the East-West transit corridor, which the proposed project supports, is likely to figure among the priorities of whichever party emerges successful in these forthcoming elections.

88. ***Georgia's prudent macroeconomic policies and structural reform programs have resulted in strong economic growth.*** Economic performance following the advent of the new government has been encouraging. Macroeconomic management in Georgia continues to show solid performance. Despite unusually severe shocks, domestic and external, the last three years have seen strong growth, macroeconomic stability, and a sound mix of fiscal and monetary policies. As a result of prudent macroeconomic policies and implementation of structural reforms, growth in 2005 was 9.6%, and in 2006 was 9.4%. The IMF completed its Sixth Review of the PRGF program in August 2007.

89. Despite the recent shocks resulting from large increases in the price of energy imported from Russia and Russia's unilateral economic and financial restrictions, growth of GDP during 2007-2009 is estimated to be in the 8-10% range. Consolidated budget revenues increased by more than ten percentage points of GDP between 2003 and 2006. Tax revenues have increased substantially, partly owing to the sweeping tax reform adopted in 2005, but also due to the crackdown on smuggling and tax evasion under way since the "Rose Revolution". The government acknowledges that sustaining and accelerating economic growth will require deepening the integration of Georgia with world markets. To that end, the Government has identified as a key priority the modernization and improvement of its transport infrastructure. Reforms implemented since 2004, along with investments in infrastructure and improvements in the regulatory environment, are supporting private sector growth. In the longer term, expected sources of growth include agro-processing and small manufacturing, tourism, transit trade activities, and mineral extraction and processing.

90. ***Georgia enjoys a strategic location yet to be capitalized.*** Georgia is located on the shortest route between Europe and Azerbaijan, Armenia and the Central Asian Republics through its Black Sea ports. It also links Russia and Turkey. Trade with neighboring countries, both transit and bilateral, is thus an important feature of the economy. Wholesale and retail trade services are the second largest sector of the economy, accounting for 13% of GDP and 11% of employment. Both imports and exports of goods and services have increased by more than 30% in 2006, while merchandise exports have expanded by 13% in 2006 despite the restrictions imposed by Russia. In response Georgia has developed closer economic cooperation with Turkey and Azerbaijan. In February 2007, the Tbilisi Declaration on Common Vision for Regional Cooperation was signed between Azerbaijan, Turkey and Georgia aiming at developing long-term and predictable relations on the basis of regional projects to establish energy and infrastructure links between them[38]. These new trade and energy routes are relevant to Georgia

[38] Turkey, Azerbaijan, and Georgia signed an Agreement in March 2007 to build a new railway track Kars – Tbilisi – Baku. Within the Kars-Tbilisi-Baku Railway Project a new 105-km railway section will be constructed and 76 km out of it lays in Turkey and the remainder 29 km - in Georgia. In addition, a 183-km railway section of

both for transit income as well as to get Georgian goods to a larger market than otherwise would be possible. Increasing revenue from oil exports in Central Asia and the Caucasus is likely to increase the demand for consumer and industrial goods.

91. ***A range of natural endowments offer strong potential for labor-intensive export-oriented growth as well as tourism activities provided the provision of adequate infrastructure enables them to develop.*** Georgia has attributes that could lead to growth in export-oriented activities, which would increase employment and broaden asset-ownership. Georgia has a comparatively open trade regime. The country benefits from an educated, inexpensive labor force and it also has a long tradition of entrepreneurship. Fertile land and favorable climates enable the production of diverse agricultural produce[39]. Georgia's scenic mountain regions, the Black Sea beaches, and rich historical and cultural heritage offer strong tourist potential. With improving law and order, rising incomes in the region, and greater interregional connectivity through the transit corridor, Georgia has an opportunity to revive its tourist industry for the CIS market as well as niche markets in Europe and the Far East.

92. ***Despite the successes of the Rose Revolution, Georgia is still in the process of building a modern state.*** GDP is not yet back to the pre-independence level. Agriculture, manufacturing, and tourism, Georgia's major sources of exports and employment in the Soviet period, are only making modest recoveries. The legacy of 70 years of command economy is challenging to overcome. Georgia's relationship with Russia is strained. This has repercussions in the export of its agricultural goods, especially wine, the import of gas and power and the ability of people to travel between the two countries.

93. ***Reducing poverty is an important challenge during this transition period.*** Strong economic growth has increased incomes for many Georgians in the middle and upper ranges of the income distribution. Although the bottom 30 percent of the population has not yet experienced similar increases in incomes, important non-income dimensions of poverty have improved, including significantly improved access for the poor to electricity, natural gas, safe water, health, and higher education. One of the key structural factors contributing to the high poverty levels in Georgia is the slow and unsustained economic restructuring of the first 13 years of transition. Output contraction contributed to a major reallocation of the labor force. Agriculture became the "employer of last resort" with employment in the sector more than doubling as a share of the total during 1992-2004. In addition, plot sizes shrank, leading to declining productivity.

94. Reducing poverty is a key priority of the Government's reform program. Social spending was increased by 5% of GDP between 2003 and 2005, pension and wage arrears were eliminated and a targeted poverty benefit was introduced in 2006. Poverty levels remain high in rural areas where incomes of those below the poverty line have not yet improved significantly. Improved

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Akhalkalaki-Marabda-Tbilisi will be repaired in Georgia to increase the carriage capacity up to 15 million tons a year.

[39] Georgia has a comparative advantage in export-oriented agro-processing areas, such as wine, hazelnut, and fruit and vegetable processing, which are significant potential sources of employment, as well as market growth for farm products. Dense forests cover one third of the country and good potential for labor intensive export-oriented wood processing exists, if a sustainable forestry regime can be developed. Georgia also has numerous mineral resources that promise some employment creation.

integration of the rural population with the national economy and a reduction over time of over-employment in agricultural activities (52% of employment for 16% of GDP) should help reduce rural poverty in the years ahead. Although Georgia has put in place the conditions necessary for poverty to decline, a sustained trend toward lower poverty has not yet been established. The incidence of poverty has remained relatively flat at about 30% during the 2003-2006 period. However, it is expected that if macroeconomic stability is maintained and economic reforms implemented, the growth path will induce net job creation in Georgia and improvements in poverty indicators.

Transport Sector and its Impact on the Georgian Economy

95. The physical location of Georgia ensures that it is a key transport link on the most direct route between the Black Sea and the Caspian Sea, and the Central Asian countries. It is situated on the historic "Silk Road", which the current TRACECA initiative seeks to emulate. The transport sector is one of fastest growing in the Georgian economy. Transport, storage and communications have substantially increased their contribution to the total output, from 4.6% of GDP in 1996 to 11.5% in 2006. The transit of oil through recently completed pipelines and the railways dominates the transport contribution to GDP. In physical terms the movement of goods by land modes has increased by more than 50% between 2000 and 2005 from 4.3 billion ton-km to 6.7 billion, with the bulk of the change coming from an almost doubling of the oil transit carried by the railways. While the railways dominate the movements of oil, the roads are the preferred mode for the movement of people and non-oil freight. Although the railways have the higher modal share in ton-km terms (89%), the greater total tonnage is hauled by road transport (26.9 million tons vs. 18.9 million by rail). This suggests that the average trip length of road haulage is less than a tenth of that by rail, reflecting the dominance of the railways on the international transport of oil, which accounts for more than three-fourth of Georgia's trade. Passenger transport is predominantly by means of road transport with 267 million person trips as against 3.6 million by rail. In terms of ton-kilometers, total land transport movement amounts to only about one-third of the levels in 1990, a reflection of the civil war in 1991/92 and the problems associated with the breakup of the former Soviet Union. The transport infrastructure remains deficient, and hinders growth in other sectors, including agriculture. The transport infrastructure has to improve if Georgia is to benefit from its strategic transit location, to support its recovering economy, and to integrate its whole population into the national economy.

96. ***Poor infrastructure and cumbersome processes inhibit Georgia from fully exploiting its transit economy potential.*** Traffic flows from the Caspian Sea, primarily in the form of crude oil and oil products, are rapidly expanding. At the moment, the main flow in the corridor is uni-directional, consisting primarily of oil and oil products, moving west to the Ports of Poti and Batumi. Non-oil trade mostly comprises Armenian and Azeri trade goods, which account for a significant share of the turnover of Georgia's ports. Georgia has not yet been able to realize the transit potential from Central Asian countries. Designed at a time of much higher traffic, Georgian transport infrastructure can handle significant additional traffic growth with limited new construction, although rail, road and port infrastructure require significant investments to rehabilitate and modernize an aging infrastructure with years of maintenance neglect. Despite being the closest maritime gateway to nearly all Central Asian countries, the Georgian route presently accounts for a negligible portion of the foreign trade of these countries. Long transit

times, poor road conditions, multiple borders that have to be crossed, and the number of times cargoes need to be handled, together with the formal and informal payments and delays, explain the limited use of the Caucasus route. The high gasoline cost and the significant reduction in corruption in Georgia should improve Georgia's transit competitiveness.

97. ***Limited transport infrastructure adds to the cost of doing business and leaves much of the population out of the national economy.*** Constraints in infrastructure add to the cost of doing business, deter foreign investment, add time and costs to the transit corridor, and leave large segments of the population out of mainstream economic activities. Analyses show a close correlation between poverty in rural households and the extent to which they are linked to markets. Poor transport infrastructure partly explains why almost two thirds of rural household agricultural production is for self-subsistence and that about 20% of rural households do not trade at all. The World Bank Rural Infrastructure survey for Georgia revealed that only in five% of surveyed communities were roads repaired within the last five years, while in 41% of communities they were last repaired 15 or more years ago. Farmers surveyed in Georgia believe that improved roads will help increase their income by providing easier access to the markets. Poor connectivity has also contributed to the weak linkages between farmers and agro-processors as few intermediate agents, wholesalers, or farmer-based organizations exist. The Bank study indicated that local road and bridge rehabilitation projects generate clear economic benefits at the community level, decreasing the importance of barter trade and increasing the number of small and medium enterprises.

98. ***Government's transport strategy is to support market integration.*** The Government transport sector strategy is to develop the infrastructure and institutional setting of the sector to support market integration and to maximize the country's potential as a transit economy. Progress in the implementation of the current sector strategy has been impressive. To that end, the country's main ports and airports have been, or are being, concessioned to the private sector; the railways are moving towards the development of profit centers and the adoption of modern marketing techniques; customs are being reformed to improve trade facilitation and reduce corruption; a decentralization process is under way to devolve local infrastructure to local governments; and a massive effort is being made, with the support of the international financial community, to upgrade the road network and reduce travel costs. The sector agenda includes major challenges, among which: (i) the legal and regulatory framework of the sector has to be overhauled to incorporate the right balance in the interface of the private and the public sectors, ensuring fair competition, safety and attention to environmental concerns; (ii) institutions have to be strengthened to fulfill their policy making, monitoring and executing roles; (iii) the decentralization process will require careful implementation to ensure that local authorities acquire the technical and financial resources necessary to deal with their new obligations; (iv) as road investments move from the more obvious works on the heavily transited international arterial roads towards the preservation of these assets and the upgrading of the secondary network, it becomes imperative to have in place the capabilities for efficient road management based on modern information systems; and (v) the materialization of the benefits of a transit economy, and the ability to compete with the now preferred alternative routes, will require a concerted public/private effort to design and implement a vision for Georgia that significantly transcends the transport sector.

Road Sector

99. The road network consists of 1,497 kilometers of international roads, with about 92% in good to fair condition; 5,446 kilometers of secondary roads of which 28% are in poor condition and need rehabilitation; and 13,386 kilometers of local roads responsibility for which has been transferred to LSG bodies[40]. There are five main roads and highways, totaling 859 km. These are: (i) Poti–Tbilisi–Red Bridge; (ii) Mtskheta–Kazbegi–Larsi; (iii) Sarpi–Batumi–Samtredia; (iv) Khashuri–Akhaltsikhe–Turkish border; and (v) Tbilisi–Marneuli–Guguti. The often rough topography, the low-capacity highways (often only 7 meters wide without shoulders), the inadequate maintenance regime, the poor technical standards of vehicles, and other adverse conditions mean the traffic flow is slow and the risk of accidents is high.

Table 1.1 - Length of Different Road Types in Kilometers (2006)[41]

Type of Road	Length km.	Institution Responsible
International Road Network	1497	RDMED
Secondary Roads	5446	RDMED
Local Roads	13,386	LSG Units
Urban Roads		
Other (agricultural, mining, forest)		
Total	**20,329**	**Including roads in Abkhazia (2,410 km) and South Ossetia (559.3 km)**

Source: RDMED, 2007

Table 1.2 - Condition of Roads under RDMED in Year 2006

Type of Road	Good (%)	Fair (%)	Poor (%)
International Road Network	60	32	8
Secondary Roads	22	50	28
Overall	**30**	**46**	**24**

Source: RDMED, 2007

100. ***The improved conditions of the road network reflect the high priority the Government has placed on road maintenance.*** The present government has as one of its top priorities the improvement of Georgia's roads. With the support of the international community the Government is expecting to bring the main international network of 1497 km to maintainable conditions by 2009. The government is committed to avoid the deterioration of the newly rehabilitated and/or improved roads and has dramatically increased resources for maintenance. The road budget was GEL 125.8 million in 2005, GEL 181.3 million in 2006 and budgeted to be GEL 280 million in 2007. The increase in funding has reversed somewhat the results from the decline in road maintenance expenditures, from GEL 125.1 million (US$59.5 million) in 1988 to

[40] Under the Organic Law on LSG Bodies, the responsibility for all local roads has been transferred to the LSG units effective January 1, 2007, after local elections in October 2006 and the implementation of territorial-administrative reform.

[41] Presidential Decree # 554 provided that some 2,000 km of local roads are reclassified from local to secondary roads category such that the size of secondary road network will increase to 5,446.4 km, and local road network decreases to 13,386 km.

GEL 26.5 million (US$13.3 million) in 2002, in nominal terms.[42] While road conditions have improved, road infrastructure remains inadequate and this has resulted in longer transit times, despite the relatively shorter distances, adds to transport costs and deters usage of the Georgian transit route. In a recent study examining the impact of road network quality on intra-regional trade in ECA countries found that from the many factors expected to have an impact on the growth of foreign trade (e.g. tariff reductions, trade facilitation measures, or export/import time) road infrastructure improvements had the highest impact[43]. Tables 1.3 and 1.4 illustrate the sharp increase in budget funding for the road sector.

Table 1.3 - Budget of RDMED (including design and preparatory works)
Including foreign funded projects (GEL thousands, current value)

	2000 actual	2001 Actual	2002 actual	2003 actual	2004 actual	2005 actual	2006 actual	2007 estimated
Road expenditures (incl. design/preparatory works)								
Internal Financing	32,200	41,816	44,913	50,405	66,929	125,813	181,334	280,000
External financing	0	18,900	38,606	49,057	28,256	15,326	16,823	131,279
Total	**32,200**	**60,716**	**83,519**	**99,462**	**95,185**	**141,139**	**198,157**	**411,279**

Source: RDMED, 2007

Table 1.4 - Expenditures of RDMED by Type (excluding design and preparatory works)
Including foreign funding projects (GEL million, current value)

	2000 actual	2001 actual	2002 Actual	2003 actual	2004 Actual	2005 Actual	2006 Actual
New construction							
Internal financing	0	0	0	0	0	14,500	52,427
External financing					3,162	3,757	
Sub-total	0	0	0	0	3,162	18,257	52,427
Rehabilitation/Periodic Maintenance (contracted out)							
Internal financing	9,773	12,590	11,012	8,812	17,577	59,826	75,846
External financing	0	18,900	38,606	49,057	25,094	11,569	16,823
Routine Maintenance (contracted out)	14,749	17,320	15,484	15,770	15,014	14,020	21,950
Total	**24,522**	**48,810**	**65,102**	**73,639**	**60,847**	**103,672**	**167,046**

Source: RDMED, 2007

101. ***The Government is focused on improving road infrastructure.*** The road sector is funded directly from the state budget, and the government has committed itself to provide adequate

[42] In the latter year, expenditures averaged a little over US$600 per kilometer, whereas the requirement based on experience elsewhere ranges between US$4,000 to US$6,000 per kilometer.
[43] Shepherd, Ben and John S. Wilson, *Road Infrastructure in ECA: Does Network Quality Affect Trade?* Final Paper, December 22, 2006

funds as agreed with IDA for the ongoing SLRP and the FEWHIP. IDA is providing US$20 million credit for the rehabilitation of about 250 km of local and secondary roads through the SLRP and the project's TA component is funding the development and implementation of regional road maintenance plans. To better allocate resources within the sector, RDMED has created regional offices to enhance local prioritization of road rehabilitation and periodic maintenance needs. Under the FEWHIP launched in 2007, IDA is providing US$19 million credit to upgrade the section on the E60 Highway from Agaiani to Igoeti, and TA for various aspect of the road sector institutional development from modernizing the curriculum of the road engineering department at the Technical University, preparing standards for design and bidding documents to improving RDMED human resource management practices and capacity building.

102. One issue that could affect the conditions of local roads is that as a part of the Organic Law on LSG Units (2005), all local roads have been transferred from RDMED to LSG units, effective January 1, 2007[44]. Given the lack of technical and professional capacity at the local level, these roads would most probably be badly maintained and further deteriorate. Rural units will benefit from such amalgamation if transparent and objective criteria are established for decision-making on prioritization of needed interventions and investments, as well as if adequate financing is ensured for management and maintenance of local roads and infrastructure. But the task is not easy and requires time, clear objectives, and careful planning.

103. Besides increasing the road maintenance budget, the Government is using its resources, in addition to external funding, for new construction of roads. The Government spent GEL 14.5 million in 2005 and GEL 52.4 million in 2006 for new construction in the road sector when nothing has been spent in the decade previously. The Government's budget for new construction for 2007 is GEL 91.5 million, and nearly GEL 500 million is planned to be budgeted for road construction alone in 2008. For instance, the Government is accelerating the pace of improvement of the E60 East-West Highway. It used its own budget for the 16 km upgrade from Natakhtari to Agaiani to dual carriageway which was half completed in September 2006. This is followed by two sections financed by IDA via the First and Second EWHIPs. Then the next 15 km section from Sveneti is expected to be financed again from the budget with detailed design already completed. The section thereafter is expected to be upgraded via the KF. JBIC is investigating the possibility of supporting the E60 Highway improvement[45]. Private sector support is also considered through concessioning[46]. Thus the E60 from outside of Tbilisi to Rikoti is expected to be a dual carriageway in the near future.

104. ***The Georgian government is focusing not only on increasing the quantity of funding but also on securing the quality and transparency of the expenditures.*** To that end, RDMED is

[44] Under this new Organic Law on LSG Units, Georgia established a two level administrative framework: the central government and LSG levels. 1,100 small and resource-poor LSG units were consolidated into 69 units. New 69 units consist of 59 former Rayons, 4 former Districts, and 4 special status cities - Tbilisi, Kutaisi, Batumi, Rustavi, and Poti. Local councils are elected in these 69 LSGs which encompass 3,736 settlements (cities, towns and villages).

[45] The JBIC mission was in Georgia in August 2007 and is financing a feasibility study to be finalized in March 2008. While they have not yet identified any particular section of the Highway, JBIC's support could be significant and would be available in late 2008.

[46] The Government is currently discussing with a potential investor the concession of about 120 km of the E60 Highway west of Tbilisi from Natakhtari up to Rikoti.

emphasizing the institutionalization of the use of modern information systems to develop multi-year rolling investment and maintenance programs and is also exploring the use of long-term performance-based maintenance contracts that are being successfully implemented in many developing countries. Under the SLRP, RDMED is retaining a consultant to carry out an in-depth assessment of road maintenance operations in Georgia. The consultant is expected to review: (i) the strategy for the allocation of resources over the network; (ii) the planning and programming of the works; (iii) the contractual relations with the private sector and its effectiveness to achieve the desired output; (iv) the capacity of RDMED to supervise the works and the overall effect of road maintenance privatization on the serviceability of the network; (v) the role and performance of the newly created regional offices of RDMED; and (vi) the maintenance of local roads, including the impact of the Organic Law on LSG Units. The proposed project will supplement the funding available under SLRP and FEWHIP to implement recommendations made by the consultants.

105. ***Vehicle Fleet.*** In 2000, there were 273,709 registered vehicles, or 61.7 vehicles per 1000 inhabitants, a relatively low rate of car ownership. Currently there are 518,823 registered vehicles, or 115 vehicles per 1000 inhabitants. Most private vehicles are 10 to 20 years old, and few people can afford to replace or properly maintain their cars at this time. The number of second-hand European cars is increasing, but the vehicle fleet still mainly consists of Soviet-made cars, which generally consume more fuel and produce more emissions. Most public transport vehicles are also in poor condition.

Table 1.5 - Vehicle Fleet in Georgia over the last seven years

Type of Vehicle	2000	2001	2002	2003	2004	2005	2006
Passenger car	224,019	248,659	273,545	301,457	334,561	376,015	417,583
Buses & minibuses	15,502	19,192	22,673	26,623	30,327	35,195	41,486
Trucks (incl. trailers)	28,801	33,337	36,325	40,053	44,440	49,654	50,923
Other (motorcycles)	5,387	5,138	4,794	6,657	7,913	9,426	8,831
Total	**273,709**	**306,326**	**337,337**	**374,790**	**417,241**	**470,290**	**518,823**

Source: RDMED, 2007

Traffic Safety

106. ***Road traffic safety is now considered an important issue in Georgia.*** Road traffic safety is an issue that is beginning to gain the attention of the Government and the public. The shortcomings in traffic safety have convinced many concerned parties that action should be taken[47]. The annual total road traffic fatalities in Georgia is high in relation to the population and in comparison with many other countries with similar degree of motorization as noted by international organizations like the World Health Organization (WHO) and the Organization for Economic Co-operation and Development/European Conference of Ministers of Transport (OECD/ECMT)[48]. Georgia's traffic fatality rate of 13 deaths per 10,000 vehicles in 2006 is

[47] The Georgian President's wife is promoting the wearing of seat belts by children. There is a recent UN sponsored road safety week in Georgia and a local NGO "Partnership for Road Safety Foundation" has been established which is promoting road safety.

[48] According to the OECD/ECMT country report from July 2006 on road safety performances in Georgia.

significantly higher than in Eastern European countries, and much higher than the approximately 2 per 10,000 vehicles in EU countries[49]. The upgrade of the E60 Highway paradoxically is expected to increase traffic fatalities. The improved highway allows cars to travel at higher speeds thus increasing accident severity.

107. Georgia as a member of the ECMT has along with other member countries committed itself to reduction in road deaths by 50% by the year 2012 compared to road deaths in year 2000. Whereas other countries by 2004 had made good progress with West European countries reducing deaths by 5.2% per year and Central and Eastern European countries reducing deaths by 3.3% per year, road deaths in Georgia had actually increased over the same period at 6.4% per year. The total number of road accidents and fatalities from 2000 to 2006 has shown an increasing trend. Between 2005 and 2006 traffic deaths have increased at 16% and injuries at 28% per year. In 2006 alone there were 675 deaths and 7084 persons injured on roads in Georgia. Besides emotional pain, traffic accidents have direct impact on a country's economic growth. The World Bank working paper "Road Safety in Individual ECA Countries" for 1999 suggested that the social economic costs of road traffic accidents for Georgia are approximately 1.1% of GDP. Preliminary estimates by the PHRD funded consultants in 2007 indicate that economic losses are now at least US$100 million per year (around 1.4 % of annual GDP)[50]. The traffic safety problem is expected to get worse in the near future as Georgia (with a motorization level of around 90 cars per 1000 population) is just about to enter the "explosive" phase of motorization when very rapid growth occurs in numbers of vehicles resulting in more traffic crashes and casualties unless effective mitigating actions are implemented.

108. ***Government has begun to address traffic safety*** For instance, the Patrol Police is now better equipped and thus more efficient, some main roads have been resurfaced, drunk driving law has been introduced and enforced, traffic monitoring devises are being installed in Tbilisi. However, there is much to be done. The Patrol Police have identified the main accident causes to be the poor condition of the roads and vehicles (e.g. tire blowouts during driving), erratic behavior of pedestrians and last but not least speeding which is thought to be the dominant cause of accidents on the main roads. Around 66% of the deaths occur in "urban" areas (either towns or built up areas along major roads). Whereas on rural roads in Georgia, where seatbelts are worn and effective police enforcement of speeding and seatbelt wearing is undertaken, deaths are only increasing at 3% per year. Deaths on urban roads are increasing at around 25% per year- thus an increasingly greater proportion of the total road deaths occur in urban areas. Over 30% of those killed nationally are pedestrians. This is almost double the percentage in many West European countries (e.g. Germany 14%, France 11%, Sweden 14%, and the Netherlands 8%). The biggest growth amongst those killed on Georgian roads is occurring amongst the age group 8-15 year old children where there has been a 117 % increase in deaths between 2005 and 2006. Urgent actions should be taken to prevent more loss of the future generation of the country. The fact that that seatbelts are not used in urban areas, that the speeds of vehicles is often excessive in "urban" areas (both within towns themselves and on sections of major roads as they pass through

[49] According to a 2004 unpublished World Bank working paper, fatality rates in other ECA countries were: Bosnia 3/10,000 vehicles, Croatia 5/10,000 vehicles, Russia 12/10,000 vehicles, Serbia 5/10,000 vehicles, Turkey 8/10,000 vehicles.

[50] Early indications are that more detailed costing research (currently being undertaken in Georgia) will show annual losses to be significantly higher than US$100 million per year.

small communities), that there are very few facilities to ensure pedestrian safety or to guide drivers through hazardous locations, all suggest that these should be the highest priority areas for urgent attention and action. Basic road accident statistics are given at the end of this Annex.

Table 1.6 - Georgia Traffic Fatality Rates over the Last Six Years and 2006 on all Roads

	2000	2001	2002	2003	2004	2005	2006
Total accidents	1,708	1,937	2,011	2,126	2,939	3,870	4,795
No. of injuries	2,082	2,368	2,509	2,619	4,069	5,546	7,084
No. of deaths	500	558	515	573	627	581	675
Fatalities per 10,000 vehicles	18	18	15	15	15	12	13

Source: Georgia Patrol Police, 2007

Appendix on the Traffic Safety situation in Georgia

109. ***Characteristics of the problem and recent trends.*** Road safety is a serious problem in Georgia and unlike many other ECMT member countries where road deaths are now decreasing, the situation in Georgia continues to deteriorate. In 2006 alone there were 675 deaths and 7084 persons injured incurring losses to the Georgian economy of at least US$100 million (1.4% of GDP) in that year. Between 2005 and 2006 traffic deaths have increased by 16% and injuries increased by 28% suggesting that the effects of the "explosive" phase of motorization are now already being reflected in increasing road deaths and injuries. Around 66% of the deaths occur in "urban" areas (either towns or built up areas along major roads) and 34% occur on "rural" roads. Whereas on rural roads in Georgia (where seatbelts are worn and effective police enforcement of speeding and seatbelt wearing is undertaken) deaths are only increasing at 3% per year, deaths on "urban" roads are increasing at around 25% per year – so all of the recent increases and a growing proportion of road deaths are occurring in towns or built up areas along major roads. Over 30% of those killed nationally are pedestrians. This is almost double the percentage in many West European countries (e.g. Germany 14%, France 11%, Sweden 14%, and the Netherlands 8%). The biggest growth amongst those killed on Georgian roads is amongst the age group of 8-15 year old children where there has been a 117 % increase in deaths between 2005 and 2006 (some road accident statistics are given at the end of this Annex). The fact that seatbelts are not worn and vehicle speeds are often excessive in "urban" areas and that there are very few facilities to ensure pedestrian safety or to guide drivers through hazardous locations on the road network suggests that these should be the highest priority areas for action.

110. ***Impact of traffic accidents on Georgia's growth.*** Unless urgent action is taken, the situation will deteriorate further as Georgia, at 90 cars per 1000 persons, is just entering the "explosive" growth phase of the motorization S curve when vehicle numbers and resultant accidents and casualties can increase very rapidly. Already road accidents directly kill or injure nearly 8000 persons each year in Georgia. Some of these people are breadwinners who contribute financially to immediate family and other relatives. International research[51] shows that in developing and transition countries the sudden losses of income from breadwinners or the unexpected additional medical /care costs of seriously injured victims can contribute to and perpetuate poverty amongst those affected by such a tragedy. Apart from social implications, road accidents are also a drain on the resources of the country. The number of traffic casualties is imposing severe strains on the scarce resources of police, medical and other agencies that have to cope with the consequences of traffic accidents. Some 20% to 30% of the beds in emergency wards of some Georgian hospitals are taken up by road accident victims. Georgia's current trends seem to confirm the UN/WHO/World Bank prediction[52], that health ministries of developing and transition countries will end up spending 25% of their national health budgets on traffic accident victims by 2020, unless efforts are made to address their road safety issues.

[51] The involvement and impact of road crashes on the poor: Bangladesh and India cases studies, Aeron –Thomas A, G Jacobs, B Sexton, G Gururaj, and F Rahman, TRL, Crowthorne, 2004.

[52] Resolution 58/9 Global road safety crisis, United Nations. World report on road traffic Injury prevention, WHO and World Bank, 2004.

111. Georgia is currently making major investments to improve its road network. This is an opportunity to avoid many of the mistakes of other more motorized European countries. By incorporating road safety features and principles now, Georgia can avoid expensive retrofit to its road infrastructures 20 years later. Inadequate development and access control along major roads can lead to problems when traffic levels increase. Roads going through local communities with illegal accesses or roadside development without too many safety problems in low traffic volume conditions can become exceedingly dangerous as traffic levels and traffic speeds increase. Planning, design and operation of road improvements should seek to minimise such risks for current and future road users.

112. ***Immediate actions that could be undertaken.*** Based on the experience of other OECD/ECMT countries, the following are illustrative interventions and their typical potential for casualty reduction:

- Seat belts enforcement: reduction in deaths by 30%, in serious injuries by 20%
- Drunk driving random testing: 15%-20% reduction in deaths and serious injuries
- Speed reductions and pedestrian facilities: 20-30% reduction in deaths and serious injuries
- Daylight headlights enforcement: 10-15% reduction in accidents
- Traffic calming: 5-20% reduction in casualties
- Speed cameras: reduction of 10-15 % in casualties and 20-30% of pedestrian deaths
- Rear high red stoplights: reduction of 20-30% in rear end crashes
- Motorbike daylight headlights enforcement: reduction of 15-20% in motorcycle accidents

113. The above mentioned interventions are all proven to be effective and some or all should eventually be incorporated in the safety action plans devised for Georgia. However, the most immediate safety problems in Georgia are:

- Non wearing of seatbelts on urban roads and by rear seat passengers
- High vehicle speeds and lack of pedestrian facilities in urban areas
- Inadequate access and development control along major roads
- Inadequate guidance and channelling for drivers to prevent unsafe behaviours.

114. The specific interventions likely to be most effective in addressing these particular problems are:

- Require the wearing of seatbelts for all vehicle occupants and on all roads in Georgia. Introduce strict police enforcement and accompanying road user education/publicity campaigns. Seek 85% wearing of seat belts.
- Require urban administrations to improve pedestrian safety and to reduce speeds in residential areas, near schools and communities along major routes to not more than 30 kph.
- Introduce safety engineering techniques to improve hazardous locations, reduce conflicts and prevent unsafe manoeuvres via low cost engineering techniques. Introduce safety audit at planning and design stages of new road schemes.

Actions proposed to improve Georgian capacity to manage road safety in the long term

115. The road safety program for Georgia should be based on the 3 'Es' which are:

- ***Education***, (for senior officials in relevant government agencies, general public, road users, traffic police, school children, etc);
- ***Engineering,*** (to introduce safety conscious planning and design for roads and traffic schemes, and for remedial measures at accident blackspot locations, etc); and
- ***Enforcement,*** (to introduce policies for targeted enforcement aimed at changing unsafe road user behaviour, etc).

116. To ensure the program is effective and sustainable on a daily routine basis, all involved agencies should practice the 3 'Cs' which are:

- ***Cooperation,*** (in developing joint road safety priorities and inter-agency working arrangements, etc);
- ***Coordination,*** (in sharing information on traffic accidents, accident blackspots and road safety issues, etc); and
- ***Collaboration,*** (in developing solutions and plans to address specific road safety issues and requirements, and in monitoring their effectiveness following the implementation).

117. ***Establishment of a National Road Safety Council.*** It has been recognized in other countries that road safety problem is too large and complex for a single government agency to address. In Georgia, many areas such as traffic law enforcement, social services, public health, hospitals, education, and road and traffic laws are the responsibility of government ministries and agencies other than the MoED and RDMED. Therefore, it will be important that all relevant agencies practice the 3 'Cs' to consolidate the basic foundation of a road safety program for Georgia. Accordingly, the Government of Georgia needs to establish a National Road Safety Council or similar high level body. This was one of the recommendations of the Roads Project consultant in 2003. The need for such body is now even more urgent. Progress towards the proper operation of such body will be an item for monitoring the Project performance.

118. ***Other good practices to be implemented***

- Set and publicize ambitious but achievable "headline" targets (e.g., reduce deaths and serious injuries by xx % by 2012) with supporting sector specific targets (e.g., increase wearing of seatbelts on all roads to 85% by 2008) to keep all efforts focused towards the common goal.
- Encourage transparent and independent monitoring through a regular performance monitoring and reporting and comprehensive 3-year reviews assessing progress towards casualty reduction targets.
- Develop a national road safety policy specifying the lead agency and requiring all key agencies to address safety issues in their areas of responsibility. This policy would be implemented by a national road safety council or similar entity as discussed above.
- In designing interventions, the Government need to look into two aspects:
    - *Design and operation of the road network and related systems* to ensure that RDMED maintains a safe and efficient network. This requires having the right design standards and operating rules and ensuring that they are complied with.

- *Controlling the conditions of entry and exit to the system.* For road safety this means ensuring that vehicles and road users are safe enough to be allowed on the road and that access and development control on the major road network minimises conflicts and dangers.

Georgia Road Accident Statistics, 2005 and 2006
(Source Patrol Police via PHRD funded consultants)

Table 1.7 - Number of road crashes

	2005	2006	Increase
Fatal	224	259	15.6%
Serious Injury	3472	4349	25.3%
Killed and Serious Injury	174	187	7.5%

Table 1.8 - Number of killed and seriously injured persons

	2005	2006	Increase
Fatal	581	675	16.2%
Serious Injury	5546	7084	27.7%

Table 1.9 - Killed Persons by road user category

	2005	2006	Increase
Drivers	162	142	-12.3%
Passengers	155	194	25.2%
Pedestrians	153	203	32.7%
Other/Unknown	111	136	

Table 1.10 - Number of persons killed in road crashes by age

	2005	2006	Increase
0-7	15	4	-73.3%
8-15	12	26	116.7%
16-25	91	125	37.4%
26-40	143	203	42.0%
41-60	168	182	8.3%
60>	73	100	37.0%
Unknown	79	35	---

Table 1.11 - Number of crashes by crash type

	2005			2006		
	Total	Killed	Injured	Total	Killed	Injured
Motor vehicle / Motor vehicle	**1471**	308	2563	**2333**	302	3677
Motor vehicle / Pedestrian	**1599**	153	1592	**1611**	203	2034
Single Motor vehicle	**800**	120	1391	**851**	170	1373

Table 1.12 - Number of crashes by environment

	2005			2006		
	Total	Killed	Injured	Total	Killed	Injured
Rural Area	**943**	223	1659	**984**	229	1646
Urban Area	**2927**	358	3887	**3811**	446	5438

Table 1.13 - Number of fatal road crashes by light condition

	2005	2006
Day	176	231
Night	98	117
Dawn/Dusk	124	98

Table 1.14 - Fatal Crashes by Major Traffic Rule Violation

	2005			2006		
	Total	Killed	Injured	Total	Killed	Injured
Speeding	**1383**	220	1983	**1972**	249	2843
Bad overtaking (into opposite lane)	**185**	21	343	**153**	29	331
Wrong Manoeuvre	**261**	49	376	**301**	39	453
Drunk Driving	**329**	34	474	**225**	62	418
Tailgating	**65**	1	79	**98**	13	129
Other	**1647**	256	2291	**2046**	283	2910

Table 1.15 - Georgia Traffic accidents, deaths and injuries on all Roads 2000-2006

	2000	2001	2002	2003	2004	2005	2006
Total accidents	1,708	1,937	2,011	2,126	2,939	3,870	4,795
No. of injuries	2,082	2,368	2,509	2,619	4,069	5,546	7,075
No. of deaths	500	558	515	573	627	581	675
Fatalities per 10,000 vehicles	18	18	15	15	15	12	13

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

GEORGIA: Second East-West Highway Improvement

119. Transport has been a Bank priority in Georgia since 1995. There have been six transport or transport related projects since 1996:

1. The *Transport Rehabilitation Project* (FY96-99, US$12.0 million) helped initiate policy reform and institutional strengthening in the sector. TA under the project resulted in a 1997 Presidential decree on "The Conception of Transport Policy". The project also introduced competitive bidding and privatization of road maintenance and construction activities. In railways, the project initiated restructuring of Georgian Railways (GR) and drafted a Railway Law.
2. The follow-on *Restructuring of the Ministry of Transport Project* (FY99-03, US$2.5 million) helped transform the "traditional-style" ministry into a policy and regulation-making body with oversight functions only and no operational or executing functions. The motor transport companies were privatized and regulatory agencies for maritime transport, aviation, motor transport, and communications were established. The reorganization created a model of reform in the midst of continuing centralized management systems and was subsequently used as a model in other public sector reforms.
3. The *Roads Project* (FY00-06, US$40 million) helped to improve the main road network, through better allocation of available road resources among all roads, and improved institutional capacity for maintaining and modernizing the road network (Project closed).
4. The *Secondary and Local Roads Project* (FY04-10, US$20 million) is an on-going project, which is helping to address transport bottlenecks to rural development by rehabilitating selected secondary and local roads. The project covers issues such as improving road administration, including the establishment of regional offices, securing adequate resources in the sector, changing inefficient and costly Soviet-era design and construction standards, improving planning and road management systems, and involving more stakeholders in the planning and development process (Project on-going).
5. The *Infrastructure Pre-Investment Facility Project* (FY06-09, US$5 million) is a grant facility to assist the Government to prepare priority infrastructure projects. The TA components for the preparation of transit corridor projects include US$1.6 million for preparing both FEWHIP and SEWHIP.
6. The *First East-West Highway Improvement Project* (FY07-11, US$19 million) is an ongoing project which upgrades from two lanes to four lanes of a 13-km section of the East-West Highway from Agaiani to Igoeti. The project also provides assistance for road sector institutional development and capacity building.

120. In addition, a 2002 study on South Caucasus Trade and Transport Facilitation was followed by *a Trade and Transport Facilitation Policy Note*, which was intended to form the basis for a proposed Trade and Transit Facilitation project which did not proceed. The Bank is currently carrying out a Caucasus Corridor Study focusing on railways and transportation of oil and oil products.

121. The Government of Georgia received a PHRD grant to prepare for the SEWHIP project. The grant funds a study to review the traffic safety issues on the East-West Highway from Red Bridge to Poti and on other international highways in Georgia.

122. Other donors' major activities in infrastructure include:

- MCC, 2005, *Javakheti Road Rehabilitation Project* (US$103 million). This project aims at better integrating and developing the Samtskhe-Javakheti Region (Project on-going).
- EBRD's involvement in the sector includes several investment and technical cooperation projects. The most recent investment project, signed in May 2006, is related to the construction of a new airport terminal in Tbilisi (€21.0 million). Earlier, in 1995 another project (€8.6 million, already completed) funded modernization of passenger terminal and installation of new equipment. In 2005, EBRD funded the Tbilisi Public Transport Project (€3.1 million). This loan is to the Tbilisi Public Company backed by a municipal guarantee to upgrade the existing bus fleet through purchase of new and second-hand buses. In 1998, EBRD funded the Trans-Caucasian Rail Link Project (€15.6 million targeting railway investment and restructuring (currently repaying). There are two proposed technical cooperation projects: Road Sector Financing and Institutional Study (€0.18 million) to review the road sector, assess investments, and provide recommendations on how to improve efficiency in the sector, and a Pre-feasibility Study for Rural Roads (€0.2 million) Borjomi – Akhaltsikhe - Goderdzi (approximately 100 km) in order to prepare a possible EBRD financed investment project for rehabilitation of the road. This road would be connected to the Javakheti road currently being rehabilitated under the MCC grant.
- International Finance Corporation (IFC) co-financed with EBRD the private sector investment in the Tbilisi Airport tender.
- Public-Private Infrastructure Advisory Facility (PPIAF), 2005, *Framework for Public Private Participation in Road Sector*. In 2005 the PPIAF funded a study which reviewed the economic feasibility of various improvement options on the East - West route with special attention to the critical section of the road between Tbilisi and Rikoti. The study analyzed the options to upgrade the existing road to four lanes or the construction of a parallel 2x2 motorway and concluded both options had acceptable economic rates of return. The Government selected the option to upgrade the existing road and has requested the IDA support. PPIAF also funded consulting services to assist the new Government in preparatory work to the concessioning of the Rikoti Tunnel.
- Technical Assistance for CIS (TACIS), 2003, *Rehabilitation of Caucasian Highways. Pre-feasibility study for Modernization of the Existing Road:* Poti-Tbilisi-Red Bridge, Georgia. During the 1990's the transportation corridor between European countries and Central and Eastern Asia was identified as a TRACECA corridor. The basis for EU/Government cooperation on the corridor was set out in Brussels in 1993 and in 1998 there was interest in the route from the US, as the corridor would provide land access to the central Asian countries further east along the route. With a view to develop the route in Georgia, the Georgian Government applied to the EU's TACIS program for funding for a study to identify a motorway option for the improvement of the existing route. This study was awarded to the consulting firm, Louis Berger, and they prepared a report for the whole Poti – Tbilisi – Red Bridge route. The pre feasibility study developed a motorway option largely along the alignment of the existing road but with essential

realignments to improve travel speeds and the introduction of bypasses to eliminate the need for the motorway to pass through inhabited areas. This pre-feasibility study (which included a general environmental review) suggested that the approximate cost of this option would be about €2 billion but that the investment would be implemented in stages as some of the works could only be justified after 2030.

- PPIAF is funding a study to help GR become more commercial by improving its freight marketing. The objectives of the consultancy are: (a) to help GR reach a mutually beneficial long term volume contract with at least one major customer, to demonstrate the benefits of such contracts for GR; and (b) to coach GR staff in how to identify, develop and negotiate additional contracts in the future. Consultants have been appointed and the study is scheduled to be completed in 2007.
- In 2005, USAID funded a consultancy on restructuring the GR, with the objective of commercializing the railway. The consultant completed a report assessing the railway's markets, operations, organization, assets, legal and regulatory framework in June 2005. A report containing restructuring recommendations was issued in October 2005. In 2006, USAID provided additional assistance to help the railway implement restructuring recommendations in the areas of: (a) accounting and organizational restructuring of the railway; (b) tariff reform; (c) legal reform; and (d) cost reduction, and information systems.
- In 2001-2005, KF loan in the amount of about US$14 million financed rehabilitation of over 80 km of international and secondary roads throughout Georgia. KF intends to finance upgrading of a section of East-West Highway.

Annex 3: Results Framework and Monitoring

GEORGIA: Second East-West Highway Improvement

Results Framework

PDO	Project Outcome Indicators	Use of Project Outcome Information
The project development objectives (PDO) are: (i) to contribute to the gradual reduction of road transport costs and improve ease of transit and safety along the central part of Georgia's East-West corridor, through upgrading a segment of the East-West Highway from Tbilisi to Rikoti; and, (ii) to strengthen capacity of government agencies (particularly RDMED) to develop and implement a traffic safety program	Reduction in travel time/vehicle operating cost from Igoeti to Sveneti National road safety action plan with targets and monitoring indicators devised and implemented	The information will be used by MoED, RDMED and other Government agencies to develop the country's public sector road investment policy and further develop the road safety policy.
Intermediate Outcomes	**Intermediate Outcome Indicators**	**Use of Intermediate Outcome Monitoring**
Component 1 Upgrade of the E60 highway between Igoeti to Sveneti from two lanes to four lanes	**Component 1** • Number of km upgraded for Igoeti to Sveneti • Igoeti-Sveneti road segment built incorporating safety specifications	**Component 1** The information will be used by MoED and RDMED for improvement of the other sections of E60 and other transit highways.
Component 2 Road safety on E60 and other roads	**Component 2** • New accident data system in place and data available and in use by key agencies to develop safety interventions in each sector • Percentage of vehicle occupants wearing seat belts on E60 highway and in Tbilisi • RDMED road safety unit strengthened • Number of hazardous locations improved per year • High level multi agency coordination body operating	**Component 2** It will be used by the Government to roll out phase by phase a nation wide traffic safety program

Arrangements for results monitoring

123. Project monitoring during the course of project implementation will be carried out by RDMED with the assistance and guidance provided by TRRC staff under close supervision from MoED. This would entail close supervision of the works and capacity building of RDMED, auditing of financial statements, and monitoring project performance indicators for the duration of the project. Close following of the monitoring indicators will be particularly important to ensure a timely completion of the implementation of institutional reforms and flag any delays. In view of the selected indicators, data collection should not be a major problem and therefore no capacity issue is foreseen.

124. Project progress reports will be prepared by TRRC on a semi-annual basis and submitted to the Bank's review. The progress reports will focus on results rather than providing process related information.

Arrangements for results monitoring

		Target Values				Data Collection and Reporting		
Project Outcome Indicators	**Baseline**	**2008**	**2009**	**2010**	**2011**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Transit time from Igoeti to Sveneti	19'	17'	12'	12'	12'	Every year	Technical reports	RDMED and TRRC
Vehicle operating cost from Igoeti to Sveneti (cars in US$/km)	0.20	0.19	0.18	0.18	0.18	Every year	Road databank	
Vehicle operating cost from Igoeti to Sveneti (trucks in US$/km)	0.76	0.74	0.72	0.72	0.72	Every year	Road databank	
National road safety action plan with targets and monitoring indicators devised	No	Yes				Every year	Project Monitoring Reports	
National road safety action plan with targets and monitoring indicators under implemention	No	Yes				Every year	Project Monitoring Reports	
Intermediate Outcome Indicators								
Component 1								
Number of km upgraded (2 lanes)	0	24	48	48	48	Every 6 months		RDMED and TRRC
Igoeti-Sveneti built incorporating safety specifications	No		Yes			Every 6 months		
Component 2								
New accident data system in place and data available and in use by key agencies to develop safety interventions in each sector	No	*	*	*	*	Every 6 months	Project Monitoring Reports (PMR)	RDMED and TRRC
Percentage of vehicle occupants wearing seat belts in Tbilisi	0%	*	*	*	*	Every 6 months	Police statistics	
Percentage of vehicle occupants wearing seat belts on E60	60%	*	*	*	*	Every 6 months	Police statistics	
RDMED road safety unit strengthened (staff number)	3	5	5	5	5	Every 6 months	PMR	
Number of hazardous locations improved per year	0	0	10	15	20	Every 6 months	PMR	
High level multi agency coordination body operating		Yes				Every 6 months	PMR	

* - Target values to be provided later once the national road safety action plan has been approved.

Annex 4: Detailed Project Description

GEORGIA: Second East-West Highway Improvement

125. **Component 1: Upgrade of the Igoeti to Sveneti section of the E60 Highway from two to four lanes including the construction of four bridges at Igoeti bypass:** This component comprises: (i) civil works for the construction of a new two lane carriage way along a 24 km section of the E60 highway from Igoeti to Sveneti between KP55 and KP79, the construction of 4 bridges to allow the crossing of a small and narrow valley and the Lekhura River at Igoeti bypass and the rehabilitation of the existing two lane carriageway; (ii) consultant services for the supervision of the works; and (iii) consultancy services for design[53] of another section of the E60 Highway to be specified by the Government at a later date to help prepare a future project. The construction of the new carriage way will mostly be within the right of way already owned by RDMED. About 9 hectares of land will need to be acquired for the construction of traffic interchanges and to connect the Igoeti bypass to the existing alignment by the Lekhura River. Land acquisition and resettlement costs would be financed solely by the Government.

126. This component will be implemented in two stages and involves two procurement packages (construction of new carriageway and rehabilitation of the existing carriageway as one package and the construction of the four new bridges as the other package.). The first stage of this component, the upgrade from two lanes to four lanes from Igoeti to Sveneti, will be the construction of two additional lanes to be followed by a second stage covering the rehabilitation of the existing carriageway from Igoeti to Sveneti and the construction of the second carriage way at the Igoeti bypass. The Igoeti bypass requires the construction of four main bridges, two for each carriageway to allow the crossing of a small and narrow valley and the Lekhura River. The construction of the new bridges will be procured as one package because the four bridges are identical for each carriage way and thus the same equipment could be reused for their construction. The construction of the bridges will also be carried out in two stages: first the construction of the two bridges along the new two lanes carriageway, followed by the second stage in the construction of the twin bridges along the parallel carriage way. This phasing will allow the opening of the additional new two lanes as soon as possible thus improving rapidly the transit along the entire section.

127. This 24-km road section crosses a rolling terrain. The new alignment will follow the alignment of the existing 2-lane highway except at Igoeti where there will be a bypass of the Igoeti village. There is no major difficulty with respect to topography, geology and hydrology, except slope stabilization is needed at the Igoeti bypass as the new carriageway will cut into on steep hillsides. The existing road is a 2 lane highway with about 10,000 vehicles per day of which about 15% are large buses or trucks. The characteristics for the proposed dual carriageway will be consistent with the Trans European North–South Motorway Standards[54]. These characteristics will allow a capacity of up to 30,000 vehicles per day, which is more than

[53] The Government would however prefer that the design is financed by IDA via a grant like in the IPF. If this happens the unused amount would be reallocated to other project components.

[54] For instance, a. traffic lanes of 3.75m; shoulders of 3m; design speed of 120 km/h; horizontal and vertical curves; gradients and other technical parameters.

twice the existing capacity, but is still justified. The status of the route will be consistent with the other highway improvements undertaken and planned along the E60. The Igoeti to Sveneti section will be accessible to all traffic, there will not be fencing and some of the interchanges will be at grade.

128. Most of the new investments will be within the existing right of way with the need to acquire only about 9 ha (of which 7 ha of private land). Some road side structures such as kiosks and restaurants will have to be removed and a few physical relocations are expected. RDMED has agreed to compensate small businesses and households affect by the project. The detailed design will include infrastructures to mitigate the effects of the new highway. Infrastructures such as locations of highway access, bus stops, road side service facilities for retail kiosks and gas stations, underpasses for industrial and agricultural traffic will be disclosed and discussed with local communities. The location of grade-separated interchanges has been agreed. RDMED will also discuss with local authorities the location of these interchanges and their impact on potential development of urban areas such as in Igoeti. There will not be restriction to access the new road as there is no parallel itinerary. Therefore, some intersections will still be at-grade, some slow-moving vehicles such tractors will be allowed to use the road and most residents will have direct access to the road. A limited number of ancillary itineraries will be built at certain location to allow safe and cost-effective access to the new road.

129. **Component 2: Road Safety:** This component comprises works, specialized consultancy services, training, and equipment as needed to strengthen the capacity of RDMED to develop and implement a traffic safety program along the E60 corridor and other roads. It relies mostly on training qualified individuals in RDMED and the technical university so as to progressively build the capacity in the country.

130. The road safety component will focus on the development within RDMED of the institutional management functions required to strengthen Georgia's safety management capacity and implement a traffic safety program. It is part of a '2nd Generation' road safety strategy which emphasizes government 'ownership' and agency 'accountability', with a clear focus on measurable safety outcomes. After review of the recommendations of the PHRD funded study, the Government is committed to reflect, as appropriate, its findings in a multi-sectoral road safety strategy and address elements of the safety management system with high impact – institutional management functions, interventions and targeted results. They are the first step in a longer process which is designed to 'learn by doing' and scale up and roll out successful initiatives incrementally across the road network. As a start, the project component will focus on the E60 Highway with the emphasis of achieving some progress along the Tbilisi to Rikoti section. The component will also include related capacity building TA which has a nation-wide focus.

131. The road safety component will include engineering measures in the E60, especially between Tbilisi to Rikoti, and other roads focusing on low cost safety improvements (blackspots removal) and supply and installation of guardrails at various locations that target high-risk road sections and features to provide better guidance (marking and signing) for road users. It also includes the development of safety management capability and capacity building in RDMED to

deal with blackspots removal as well as developing new standards for road safety (marking, signing, traffic management, etc...).

132. The road safety component takes E60 as a "demonstration" corridor so that safety measures are implemented on a pilot basis to develop relevant skills which can then be transferred to other parts of the road network by local professionals in different sectors. This involves implementing "demonstration" schemes along the E60 corridor to introduce road engineers and maintenance engineers to low cost safety engineering techniques that can be used to eliminate accident blackspots, to improve guidance for drivers, to reduce speeds and to provide increased safety for pedestrians. The activities are:

- Training for RDMED staff to more effectively analyze hazardous locations and to be able to design and oversee implementation of safety improvements.
- Reduce blackspots and remove unsafe or inconsistent features along the existing E60 road. For example, edge markings and reflective delineators to provide advance warnings to drivers and to guide them through intersections and dangerous bends.
- Supply and installation of guardrails at various hazardous locations.
- Improvements outside "urban" areas that can range from building fences where there is danger of animal encroachment onto the road, to improving visibility, making provision for pedestrians, creating safe waiting areas at intersections and reducing potential conflicts at petrol stations by rearranging entry and exit points using curbstones.
- Improvements within built up or "urban" areas where major roads pass through communities along E60 route can consist of creating threshold effects and road narrowing at each entry/exit point of a built up area to make a clear distinction between the open road and slower speeds required for the "urban" area, improving road crossing facilities for pedestrians and measures to reduce speeds of drivers as they pass through the community.
- Capacity building[55] and training to RDMED to update standards for road marking, signing and traffic management during road works and for when the road is completed and open to traffic. These standards can be used by consultants designing other sections of the E60 highway to provide more consistency for drivers on different sections of the E60 Highway.

133. **Component 3: Project implementation:** The component will fund consultant services for TRRC[56], project audits and will finance incremental operational costs to support implementation of the project.

[55] In addition to funding from the project, one opportunity to provide capacity building that is being considered is to arrange external peer to peer support for the Patrol Police sourced from Police agencies in other countries with relevant road policing experience and knowledge. The World Bank Global Road Safety Facility is now identifying and evaluating options for the creation of a Global Traffic Safety Police Network and it is proposed to consider Georgia as a pilot study to explore how this network might function, if the MoIA would find this useful. In addition, services to support the enforcement sub-component might be obtained from TISPOL, the European traffic safety police network, and the costs of bringing an expert team to Georgia and supporting them on the ground might be met by the Global Road Safety Facility, if the Ministry is interested.

[56] TRRC's assistance to RDMED is funded under the on-going FEWHIP. The proposed project will supplement FEWHIP funding when necessary or for activities specific to the new project and not covered under FEWHIP and cover TRRC's services when the implementation of FEWHIP is completed. The compensation package is monitored by RDMED.

Annex 5: Project Costs

GEORGIA: Second East-West Highway Improvement

Project Cost By Component and/or Activity	Local US$ million	Foreign US$ million	Total US$ million
Roads works including land acquisition, resettlement, supervision and design of a future section	41.50	29.00	70.50
Road Safety	1.70	0.43	2.13
Project Implementation	0.72	0.0	0.72
Total Baseline Cost	43.92	29.43	73.35
Physical Contingencies	2.58	1.57	4.15
Price Contingencies	1.50	1.00	2.50
Total Project Costs[1]	48.00	32.00	80.00
Interest during construction	0.00	0.00	0.00
Front-end Fee	0.00	0.00	0.00
Total Financing Required	48.00	32.00	80.00

[1]Identifiable taxes and duties are US$12.0 million, and the total project cost, net of taxes, is US$68.0 million. Therefore, the share of project cost net of taxes is 51.5%.

134. All costs include Value Added Tax (VAT) except for imported goods which are net of taxes and duties.

Annex 6: Implementation Arrangements

GEORGIA: Second East-West Highway Improvement

135. The FA will be established between IDA and Georgia. The Project will be implemented by RDMED, with assistance from TRRC.

136. TRRC was established in late 1995 to assist in the implementation of the Bank Transport related project. TRRC main functions are project monitoring and evaluation, accounting, disbursements, financial reporting, auditing arrangements, and support to the implementation agencies in procurement, and coordination with the World Bank and other donors. TRRC's experience in managing Bank projects is based on the participation in six IDA-financed projects[57]. Procurement and FM practices by TRRC are determined to be in accordance with the World Bank guidelines. TRRC will work with both the Treasury service of the MoF and the NBG for administration of the DA, and with the MoED and RDMED for project implementation. RDMED and TRRC will sign an amendment to the existing Implementation Support Agreement spelling out their respective roles and responsibilities.

137. TRRC is already funded under FEWHIP. After completion of the FEWHIP, the operating expenses for TRRC will be covered solely by this project. The estimated incremental expenses to be financed by the project are US$620,000.

138. The Project will be implemented over a 3.5 year period from early 2008 to August 2011. There is a provision for retroactive financing up to SDR4 million. The principal component of the Project is two construction contracts. Supervision of works will be carried out by a consulting firm hired under TOR satisfactory to the Bank.

[57] Transport Rehabilitation Project (1996), Restructuring of Ministry of Transport Project (1999), Roads Project (2000), Secondary and Local Roads Project (2004), Infrastructure Pre-Investment Facility Project (2006); First East West Highway Improvement (2007).

Annex 7: Financial Management and Disbursement Arrangements

GEORGIA: Second East-West Highway Improvement

A. Financial Management

139. **Country Issues.** Since the Rose revolution the Government has undertaken substantial measures to improve its systems of financial management. However, the Draft Public Expenditure and Financial Accountability assessment conducted in 2007 identifies the key areas in Public Financial Management (PFM) which still needs improvement. The 2004 Country Financial Management Accountability Assessment (CFAA) in Georgia had concluded that significant and serious weaknesses remained in many parts of the public expenditure management system. As part of the reform process, the revenue accounting was transferred from the NBG to the Treasury and a system for cash management has been introduced. The severe cash shortages of the past few years have been addressed. From January 2006 a Single Treasury Account was introduced. The Treasury is implementing a modern treasury system with the support of the on-going Bank-financed Public Sector Financial Management Reform Support (PSFMRS) Project and series of Poverty Reduction Support Operations (PRSO). In addition, the Bank's FM team has reviewed the Treasury system and assessed it as satisfactory for holding the Bank-financed projects' DA. Therefore, the Treasury Service will be used for holding the project's DA. Specific procedures have been developed by the project to secure proper financial accountability of this project and to minimize project FM risks. Additional FM arrangements in the project will include the audit of PFS by independent auditor acceptable to the Bank, in accordance with term of reference acceptable to the Bank. The country risk is assessed to be moderate.

140. **Strengths and Weaknesses.** The significant strengths that provide a basis for reliance on the project FM system include: (i) significant experience of TRRC FM staff in implementing Bank-financed projects for the past several years; (ii) adequate accounting software utilized by TRRC, (iii) FM arrangements similar to the FEWHIP and SLRP projects currently being implemented by TRRC and found to be adequate, (iv) the unqualified audit reports and positive management letters issued by TRRC managed projects' auditors on the projects financial statements, and (v) timely received IFRs (on the current projects) found to be acceptable to IDA. There are no significant weaknesses identified in TRRC. However, TRRC needs to update its FMM before the start of project implementation to reflect the specific activities of the new project with the relevant Chart of Accounts to be enclosed.

141. **Risk Analysis.** The overall FM risk for the project is low. Although the project will be implemented in an environment of high perceived corruption, adequate mitigation measures are in place to ensure that the residual risk is acceptable. The Table 7.1 below summarizes the FM assessment and risk ratings of this project:

Table 7.1 - Financial management assessment and risk ratings

	FM Risk	*Risk Mitigating Measures*	*Residual Risk*
INHERENT RISKS			
Country level			
PFM institutions are improving but still weak (see country issues section above). Corruption has significantly decreased, but still remains an area of concern.	S	TRRC is to maintain independent FM system, use of private auditors and use of Treasury for DA. In addition the WB project and a series of PRSO operations on PFM strengthening are implemented.	M
Entity level			
Risk of political interference in entity's management and replacement of the management.	M	Any changes to the structure in the implementing agency will require agreement with IDA. However, there is a moderate risk of changes in the staffing.	M
Project level			
Project is small-sized, with Treasury used for flow of funds from IDA and Government with risk of inefficiency of the operations on the Treasury and resulting in slow funds disbursement.	M	The disbursement risk is being mitigated as follows: (i)the WB is supporting a Treasury improvement project and there will be training provided to the	L
OVERALL INHERENT RISK	**S**		**M**
CONTROL RISKS			
Budget Good Budgeting system. Budget is prepared in much detail which is necessary for monitoring the project.	L	No additional mitigation measure is required	L
Accounting The accounting staff has extensive experience in the Bank's procedures for disbursement and financial management, including IFR preparation. TRRC utilizes adequate accounting software.	L	No additional mitigation measure required	L
Internal Controls Internal Controls System in TRRC is adequate.	M	The FMM to be updated.	M
Funds flow Government and IDA funds will flow through Treasury Service.	M	The Treasury system strengthening under the new **WB PSFMRS project.**	M
Financial Reporting IFRs have been received on time and found to be acceptable to IDA. Auditors issued unqualified audit reports on the projects annual financial statements and positive management letters.	L	No additional mitigation measure required.	L
Auditing The audit will be carried out by independent auditors acceptable to the Bank.	M		
OVERALL CONTROL RISK	**M**		**L**
RESIDUAL RISK RATING	**M**		**L**

H – High S – Substantial M – Modest L – Low

142. **Implementing Entity**. Implementation arrangements are described in Annex 6. Implementation will be supported by TRRC. The risk associated with TRRC is moderate due to the possible intervention to modify the structure and staff of the organization. Any changes to the structure and staffing in the implementing agencies will require agreement with IDA.

143. **Accounting Staffing.** The accounting function at TRRC is staffed with qualified and experienced personnel. The TRRC FM staff consists of an experienced and knowledgeable financial manager and an accountant. The financial manager is responsible for the projects overall financial management, whereas the accountant is responsible for posting initial accounting data into the accounting software, tax reporting, reconciliation of all accounts, and managing Treasury operations along with preparing all necessary documentations. The formats and the tables of the reports to be submitted to MoF are prepared by the financial manager. The existing FM staffing in TRRC are considered adequate to implement the new project. The financial manager will have primary responsibility for the quarterly IFRs and will prepare the annual financial statements for audit. The risk associated with staffing is assessed as low.

144. **Budgeting and Planning.** TRRC is capable of preparing relevant budgets. TRRC has been preparing annual budgets for the six projects based on procurement plans and in line with the Project Implementation Plan. The budgets form the basis for allocating funds to project activities, for requesting funds from the government for counterpart contribution and for payments via Treasury system as appropriate. The financial manager and head of procurement at TRRC are responsible for budget preparation which is approved by RDMED and agreed with the Bank. TRRC regularly (at least quarterly) conducts variance analysis of the financial performance and report to the management and RDMED for adequate actions to be taken, if applicable. The risk associated with planning and budgeting is assessed as low.

145. **Information Systems.** TRRC utilizes ORIS accounting software, which is used by most of projects in Georgia and was found as adequate for accounting and reporting purposes in Bank-financed projects. The accounting package has the functionality of generating IFRs automatically. The risk associated with information systems is assessed as low.

146. **Accounting Policies and Procedures.** The accounting books and records of TRRC will be maintained on a modified cash basis and PFS, including quarterly IFRs, are going to be presented in United States dollars. The FMM is being updated to incorporate the new chart of accounts for the SEWHIP. The risk associated with accounting policies and procedures is considered as low.

147. **Internal Controls and Internal Audit.** The internal control procedures applied at TRRC are acceptable to the Bank, adequate for the current projects and the SEWHIP project's implementation, and are assessed to be capable of providing timely information for reporting on the projects. The reconciliation of project accounting records with WB disbursement data and Treasury statements is conducted regularly. The controls over SoE preparation were found to be adequate. TRRC does not have a petty cash box, and there are no specific Director expenses. There is a reasonable segregation of duties established between FM staff at TRRC. Detailed asset/inventories register will be maintained as part of the project internal control procedures.

TRRC needs to update its FMM to reflect the specific activities of the project with the description of the adequate internal controls. TRRC has no internal audit function and none is considered necessary given the size of the organization. The risk associated with internal controls and internal audit is considered as moderate.

148. **External Audit.** No significant issues have arisen in the audits of previous Bank-financed projects, except for the delayed submission by 4 (four) weeks of the financial statements on the active projects for the calendar year (CY) 2006 because the auditing firm suspended activities during a government inspection of TRRC accounts. The inspection uncovered no wrong doings in TRRC. The audit of the SEWHIP project will be conducted (i) by independent private auditors acceptable to the Bank, on TOR acceptable to the Bank, and procured by TRRC, and (ii) according to the International Standards on Auditing (ISA) issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants (IFAC). TRRC's previous and current auditing arrangements and findings are satisfactory to the Bank and it has thus been agreed that similar audit arrangements will be adopted for the SEWHIP, to include the SEWHIP's PFS, SoEs and DA statement, except that the contract with the auditor and the timing of commencement of the audit will be made early enough to have the audited financial statements submitted to the Bank by due dates. The TORs for the audit of CY2006 will likewise be used for the audit of all projects being implemented by TRRC starting with CY2007. The annual audited PFS will be provided to the Bank within six months of the end of each FY and also at the closing of the project. The contract for the audit awarded during the first year of project implementation and thereafter may be extended from year-to-year with the same auditor, subject to satisfactory performance. The cost of the audit will be financed from the proceeds of the Credit.

149. The following chart identifies the audit reports that will be required to be submitted by the project implementation agency together with the due date for submission.

Table 7.2 - Auditing Arrangements

Audit Report	***Due Date***
Financial statements – continuing entity	Not applicable
Project financial statements (PFS), including SoEs and DA. The PFSs include balance sheet, project sources and uses of funds, uses of funds by project activity, SoE statements, Statement of DA, notes to financial statements, and reconciliation statement.	Within six months of the end of each FY and also at the closing of the project

150. In addition, the Chamber of Control, the country's supreme audit institution, performs ad hoc external audits of TRRC and the projects under its implementation. The risks associated with external audit are considered low.

151. **Reporting and Monitoring.** Project management-oriented IFRs – previously known as Financial Monitoring Reports – will be used for project monitoring and supervision and the indicative formats of these will be included in the TRRC FMM. TRRC will be producing a full set of IFRs every quarter throughout the life of the project. The format of IFRs has been agreed during assessment which includes: (i) Project Sources and Uses of Funds, (ii) Uses of Funds by Project Activity, (iii) DA Statements, (iv) Balance Sheet, and (v) SoE Withdrawal Schedule.

These financial reports will be submitted to IDA within 45 days of the end of each quarter. The first quarterly IFRs will be submitted after the end of the first full quarter following the initial disbursement. The risk associated with reporting and monitoring is assessed as low.

152. **Funds Flow and Disbursement Arrangements.** Project funds will flow from (i) IDA, either via the DA[58] to be maintained in the Treasury, which will be replenished on the basis of SoEs or full documentation, (ii) on the basis of direct payment applications, received from TRRC, and (iii) the Government, via the Treasury through normal budget allocation procedures initiated by the implementing agencies in accordance with standard Georgian Treasury and Budget execution regulations. Those funds will be used to finance eligible expenditures under the project. Withdrawal applications for the replenishments of the DA will be sent to the Bank at least every three months, or when the balance of the DA is equal to about half of the ceiling, whichever comes first. The risk associated with funds flow and disbursement is considered as moderate.

153. **Supervision Plan.** As part of its project supervision missions, IDA will conduct risk-based FM supervisions at appropriate intervals. During project implementation, the Bank will supervise the project's FM arrangements in the following ways: (a) review the project's quarterly IFRs as well as the project's annual audited financial statements and auditor's management letter and remedial actions recommended in the auditor's Management Letters; and (b) during the Bank's on-site supervision missions, review the following key areas (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) disbursement management and financial flows, including counterpart funds, as applicable; and (iv) any incidences of corrupt practices involving project resources. As required, a Bank-accredited Financial Management Specialist will participate in the supervision process.

B. Disbursement Arrangements

154. **Retroactive financing.** Disbursements from the Credit will only be made for eligible expenditures made after September 1, 2007. Retroactive financing is limited to about 18% of the Credit amount (SDR4 million) and will be reimbursed promptly upon effectiveness of the Credit.

155. **Allocation of Credit Proceeds.** The expected Credit disbursement period is three and a half years (CY2008 – mid CY2011). Disbursement will follow transaction-based credit disbursement procedures made against eligible expenditures. Table 7.3 shows allocation of the Credit proceeds. The financing percentages are in line with the Country Financing Parameters (CFP) of Georgia. Land acquisition and resettlement costs will be solely financed by the Government.

Table 7.3 - Allocation of Proposed Credit

Expenditure Category	Amount in US$ million	Financing percentage
Works, goods, consultancy services, training and incremental operating costs	35.00	70%

[58] The DA arrangements are similar to those under the ongoing FEWHIP.

156. **Use of Statements of Expenditures (SoEs).** All project expenditures including incremental operating costs will be reported on the SoEs. In addition, copies of receipts will be used for: (a) goods contracts with estimated costs more than US$200,000 each; (b) works contracts more than US$1,000,000 each; and (c) consultants contracts with firms more than US$100,000 and individuals more than US$50,000. For all expenditures, full documentation in support of the SoEs will be retained in TRRC and made available for review by Bank missions during project supervision and by the project's auditors. The SoE documents will be retained in TRRC for at least two years after closing of the project.

157. The minimum application size for payments directly from the Credit Account or for issuance of Special Commitments is 20% of the ceiling of the DA. SoEs will be audited in conjunction with the annual audit of the project (see description of the project's FM arrangements above). There is no plan to move to periodic disbursements through use of IFRs, as this method of disbursements has not yet been agreed with the Government on Bank-financed projects in Georgia.

158. **Designated Account.** To facilitate the project implementation, the Borrower will establish a DA in US dollars and maintain it until project completion. The DA will be opened as a Treasury's special foreign currency account at the NBG, and on terms and conditions acceptable to the Bank. The DA will be drawn upon to meet payments to contractors, suppliers and consultants under the project. The DA will be audited in conjunction with the annual audit of the project.

159. A review of the Procurement Plan (PP) indicated two large procurement packages executed in 20 and 22 months. The remainder of the project expenditure will cover largely consultancy services, goods and operating costs for the duration of the project. In light of this, the ceiling for the DA will be limited to US$8 million and funds can be withdrawn from the Credit account as project implementation progresses until that limit is reached. Replenishment applications should be submitted at least every three months and must include reconciled bank statements as well as other appropriate supporting documents.

Annex 8: Procurement Arrangements

GEORGIA: Second East-West Highway Improvement

A. General

160. Procurement of contracts for goods, technical (non-consulting) services and works for the proposed Project would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004, revised October 2006 (Procurement Guidelines) and the provisions stipulated in the FA. Procurement of contracts for consulting services would be carried out in accordance with the "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised October 2006 (Consultants Guidelines) and the corresponding provisions stipulated in the FA. The various expenditures under different expenditure categories are described below. For each contract to be financed by the Bank, the procurement or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements and time frame will be agreed between the Recipient and the Bank in the PP. The PP will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

161. **Advertisement:** a General Procurement Notice (GPN) was published in July 2007 in the *United Nations Development Business online (UNDB)* and was also published in the printed version of the UNDB. The GPN gives a general description of the goods, works and consulting services contracts to be procured under the Project and invites all potential suppliers, contractors and consultants to express interest and request additional information from RDMED/TRRC. Specific Procurement Notices (SPN) will be published as the corresponding bid documents become available.

162. **Debarments:** The Recipient will respect debarment decisions by the Bank and will exclude debarred firms and individuals from the participation in the competition for Bank-financed contracts. An updated listing of such firms and individuals can be found at: http://www.worldbank.org/debarr

163. **Procurement of Goods:** Only goods for Safety Documentation, Guidelines, and Manuals for RDMED Safety Engineering Unit with an estimated value of US$50,000 equivalent will be procured under the Project. This procurement of goods comprising readily available off-the-shelf items will be carried out using shopping procedures (SH).

164. **Procurement of non-consulting services:** No such procurement is envisaged.

165. **Procurement of Works:** There are two International Competitive Bidding (ICB) works contracts identified under the Project: (i) the upgrading of a 25 km long road section between Igoeti and Sveneti on the E60 highway west of Tbilisi (ii) the construction of bridges at the Igoeti junction, estimated in total at US$65.00 million. The procurement for these two contracts will follow ICB procedures using the Bank's applicable Standard Bidding Documents (SBD) for Works. Bidding for the road works contract will be preceded by a pre-qualification exercise and only qualified bidders will be allowed to bid. For bridge works post-qualification will apply.

166. FA will also provide for shopping of small works for road safety improvement representing contracts estimated at less than US$0.1 million equivalent, for a total estimate of US$1.45 million, including installation of guardrails at various locations. If justified some of these small works contracts may be grouped into National Competitive Bidding (NCB) works contracts.

167. **Selection of Consultants:** Contracts to provide consulting services will be required to (i) supervise the above works contract (ii) to design a future section of the highway and (iii) to provide capacity building and training under the Project. The total estimated cost for consulting services is US$4.73 million. Quality and Cost Based Selection (QCBS) will be used for contracts estimated to cost above US$100,000. Consultants' Qualifications Selection (CQS) will be used for contracts estimated at less than US$100,000 equivalent while Least Cost Selection (LCS) will be followed to obtain a contract for audit services. Contracts to provide the services of individual consultants will also be procured. The FA will provide for all selection methods identified in the Consultants Guidelines to cover all possibilities.

168. Short lists of consultants for services estimated to cost less than US$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. No consulting contracts that would engage ineligible government agencies are envisaged at this time.

169. **Training, study tours and attendance at conferences:** Training for development of national standards (marking, signing, etc...), for blackspot removal, and study tours will be financed under the Project. For organization of training and study tours procurement procedures agreed with the Bank (AP) will apply.

170. **Incremental Operating Costs:** All incremental operating costs (IOC) in support of the day-to-day management of the Project would be financed under the FA. These expenses (estimated at US$0.62 million equivalent) include the salaries and social taxes of the concerned staff as well as customary office expenses including costs for communications, translations and travel. The Bank will review and agree to detailed itemized budgets covering IOC expenses.

B. Assessment of the Implementing Agency's capacity to implement procurement

171. Procurement activities under the FEWHIP are being carried out by RDMED assisted by TRRC. RDMED and TRRC are also involved in the implementation of the on-going SLRP and were responsible for the implementation of the Roads Project which is now closed. RDMED includes a Procurement Department comprising eight procurement professionals who normally work on procurement under the Government budget and are not proficient in English. Because of the language limitation, the Procurement Department depends on work carried out by consultants and TRRC. In preparation for the implementation of the Project RDMED has hired through TRRC a second full time procurement specialist, who is proficient in English. The concerned procurement staff are in general familiar with Bank procurement rules and procedures but lack experience in pre-qualifications and in the procurement of larger works contracts. The prospects for better integration of procurement functions should improve as RDMED has moved

its staff and offices into the same multi-story building in which TRRC already occupies part of one floor. This should lead to closer working relationship between RDMED and TRRC.

172. Recently the RDMED Chairman assigned a group of staff to assume procurement responsibility for Bank sponsored projects. The Head of the Procurement Department is leading a group of younger staff in RDMED who do not work in his own Department but who have had some exposure or training in procurement but are knowledgeable in English and willing to move forward professionally. Membership in this group is also extended to one of the two procurement officers from TRRC who is also inexperienced but shows promise. The Deputy Chairman of RDMED will be supervising the work of this informal group which, if proves successful, could develop into a unit for accumulation of the professional and institutional capacity and experience in international procurement.

173. This procurement capacity assessment is based on a recent development. The hiring of the procurement specialist English proficient and familiar with Bank's procurement procedures is a good signal of RDMED disposition to improve its procurement capacity.

174. During the Project Launch Workshop, attention will be given to (i) the requirement to advertise contract opportunities as well as the outcome of evaluations and contract awards in dgMarket/UNDB (ii) the customary connection between offers or bids and the resulting contract and (iii) payments under Bank-financed contracts normally not be directed to any other party than the one performing the contract. Bank team will carefully review the qualifications and experiences of evaluators nominated for the evaluation of applications for pre-qualifications as well as bids for the exceptionally large road rehabilitation and construction contracts. The contractor(s) eventually selected will be supervised by technically qualified supervisors to help assure that road quality specified in the contract is delivered in a timely manner. Attention will be given to the need to assure that debarred firms (or individuals) not be given an opportunity to compete for Bank-financed contracts. As a procurement advisor is working out of the Bank's office in Tbilisi, the risk associated with procurement to be handled by the implementing agency is deemed limited and manageable.

175. The Government is making determined efforts to introduce effective public procurement legislation and to widen and strengthen its application. However, despite the satisfactory procurement capacity of RDMED and TRRC to carry out the project, the risk level in the overall Georgian procurement environment in which the Project will function remains "high". The Bank team will maintain customary oversight and will carry out prior review of all major contracts in agreement with the thresholds given in section F at the end of this Annex.

C. Procurement Plan

176. At appraisal, the borrower submitted a PP for implementation of procurement activities which provides the basis for determining what procurement and consultant selection activities methods are to be followed. This plan will be further developed and agreed during loan negotiations. It will also be available in the Project's database and in the Bank's external website, without cost estimates. The PP will be updated annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

D. Frequency of Procurement Supervision

177. In addition to the regular prior review supervision to be carried out from the Bank's country office in Tbilisi, the agency capacity assessment recommends supervision missions every six months – ideally in connection with supervision of other projects in Georgia. Post review of procurement actions will be carried out regularly by Bank procurement staff stationed in the Georgia Country Office.

E. Details of the Procurement Arrangements

178. **Procurement methods and thresholds:** The FA would define the appropriate methods for various procurement and selection methods to be followed. Thresholds for procurement methods and prior review requirements are indicated below on the basis of the Bank's assessment of the capacity of the agency or agencies which will be responsible for procurement. The risks for corruption in the country and the capacities of the manufacturing, construction and consulting industries in Georgia have also been taken into consideration. The PP will specify for each procurement action whether it will be subject to prior or post review.

179. **Goods, Works, and Non-Consulting Services** (estimates in US$ million equivalent)

Table 8.1 - List of contract packages to be procured

Ref. No.	Contract (Description)	Estimated Cost (US$ million)	Procurement. Method	Prequalification (yes/no)	Domestic Preference	Review by Bank (Prior/Post)
1	2	3	4	5	6	7
	Component 1: Upgrade of the Igoeti to Sveneti section of the E60 Highway from two to four lanes					
	Igoeti-Sveneti section		ICB	Y		prior
	Igoeti Bridges		ICB	No		prior
	Component 2: Road Safety					
	Low cost safety improvements (several lots)		SH/NCB	No		prior
	Installation of guardrails in various locations (6-8 contracts)		NCB/SH			prior
	Safety documentation, guidelines, manuals for Safety Engineering Unit and Safety Management		SH			prior

180. **Consulting Services** (estimates in US$ million equivalent)

Table 8.2 - List of consulting assignments subject to prior review

Ref. No.	Contract (Description)	Estimated Cost (US$ million)	Procurement method	Review by Bank (Prior/Post
1	2	3	4	5
	Component 1: Upgrade of the Igoeti to Sveneti section of the E60 Highway from two to four lanes			
	Supervision contract for Igoeti-Sveneti section		QCBS	Prior
	Design for a future section		QCBS	Prior
	Component 2: Road Safety			
	Capacity building and training for development of National Standards and solving other Traffic Safety issues		QCBS	Prior
	Training/Study tour		Agreed Procedures	Prior
	Component 3: Project implementation			
	Project Financial Audits		LCS	Prior

181. Consultancy services estimated to cost above US$100,000 per contract for firms, US$50,000 for individual consultants and Single Source Selection (SSS) of consultants (firms or individuals), if any, will be subject to prior review by the Bank.

182. Short lists of consultants assignments estimated to cost less than US$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

F. Procurement and Prior Review Thresholds

183. Thresholds for procurement and prior review are described below and summarized in Table 8.3:

184. **Goods:** The following contracts are subject to the Bank's prior review as set forth in paragraphs 2 and 3 of Appendix 1 to the Procurement Guidelines:

1. ICB: all contracts regardless of value;
2. NCB: the first two contracts regardless of value as well as all contracts estimated to cost the equivalent of US$200,000 or more;
3. SH: the first two contracts.

185. **Works:** The following contracts are subject to the Bank's prior review as set forth in paragraphs 2 and 3 of Appendix 1 to the Procurement Guidelines:

1. ICB: all contracts regardless of value;
2. NCB: the first two contracts regardless of value as well as all contracts estimated to cost the equivalent of US$1 million or more;
3. SH: the first two contracts.

186. **Consulting Services:** Contracts for services with firms estimated to cost the equivalent of US$100,000 or more and contracts with individuals estimated at US$50,000 or more as set forth in paragraphs 2 and 3 of Appendix 1 to the consultant Guidelines. CQS may be used for contracts estimated to cost less than US$100,000 equivalent.

187. **Training:** For all training events and activities estimated at US$50,000 or more, criteria for selection of trainees and training institutions as well as arrangements for the conduct of training will be subject to the Bank's prior review.

188. All other contracts will be subject to post review; to be reviewed in a ratio of one contract in five.

Table 8.3 - Summary of Procurement and Prior Review Thresholds (all amounts in US$ thousand)

Goods and Works

Exp Category	Method	Procurement Thresholds	Prior Review Thresholds
1. Goods	ICB	> $ 300 K	All contracts
-"-	NCB	< $ 300 K	First 2 contracts and all > $ 200 K
-"-	SH	< $ 100 K	First 2 contracts
-"-	DC	No limits*	All contracts
2. Works	ICB	> $ 2 Mil	All contracts
-"-	NCB	< $ 2 Mil	First 2 contracts and all > $ 1 Mil
-"-	SH	< $ 100 K	First 2 contracts
-"-	DC	No limits *	All contracts

* Should be used only when justified by the circumstances and situations outlined in the Bank's Procurement Guidelines.

Consultants

Exp Category	Method	Prior Review Thresholds
3. Cons. Services firms	QCBS	All contracts > 100 K
	FBS	All contracts > 100 K
	LCS	All contracts > 100 K
	CQS	None
	SSS*	All contracts
3. Cons. Services individuals	IC	First contract and all > 50 K as well as all sole source contracts
4. Training	Agreed Procedures	All events and activities > 50 K

* Should be used only when justified by the circumstances and situations outlined in the Bank's Consultants Guidelines.

Annex 9: Economic and Financial Analysis

GEORGIA: Second East-West Highway Improvement

A. Economic Analysis

189. The economic analysis covers the main component of the project: the upgrade from two to four lanes of the 23 km highway between Igoeti to Sveneti, construction of the Igoeti bypass (2.5 km), and rehabilitation of the 2.7 km local two-lane road through the Igoeti village.

190. The economic evaluation is based on a comparison of the economic costs and benefits of the proposed project with the "without project case". The evaluation comprises two distinct investments: (i) the upgrade of 23 km Igoeti-Sveneti highway section from two to four lanes; and (ii) construction of the Igoeti bypass. The "without project case" corresponds to the absence of any capital investment on the road, but a minimum routine and periodic maintenance to maintain the existing infrastructure in its current condition. This Annex comprises four parts: (A) the present general consideration; (B) traffic forecasts; (C) project costs (investment costs, maintenance costs, travel time costs, and vehicle operating costs); (D) cost-benefit analysis; and (E) sensitivity analysis to check the robustness of the economic results.

B. Traffic Forecasts

191. **Base year traffic data.** Traffic counts between Natakhtari and Gori, where the Igoeti-Sveneti section is located, are undertaken every six months by RDMED. This analysis uses the average traffic counts performed by RDMED in April and July 2007. The 2007 flows along this section are shown in Table 9.1 below:

Table 9.1 - Average Daily Traffic (No. of vehicles in both directions)

Vehicle type	NATAKHTARI	IGOETI A.	SVENETI
Cars	9,287	7,772	6,132
Minibus-Pick Up	2,614	1,142	1,588
Large bus	822	409	422
Light truck	653	286	397
Medium truck	548	273	282
Heavy truck	279	235	254
Articulated	418	353	382
TOTAL	**14,621**	**10,470**	**9,457**

192. Passenger vehicles along the section represent 88% of total traffic, while light vehicles account for 90% of traffic. Table 9.2 below is based on traffic counts performed by the consultants in charge of the feasibility study in May 2006. It shows the average distributions in the two traffic flow directions along the entire E60 highway: Tbilisi (i.e. from Tbilisi to Gori) and Gori (i.e. from Gori to Tbilisi).

Table 9.2 - Average Daily Traffic by Direction (No. of vehicles per day)

Vehicle type	AGAINI		IGOETI Man.		IGOETI Aut.		GORI	
	Direction		Direction		Direction		Direction	
	Tbilisi	Gori	Tbilisi	Gori	Tbilisi	Gori	Tbilisi	Gori
Cars	2,889	3,185	2,900	3,393	3,105	3,174	2,988	3,001
Minibus - Pick up	1,240	1,306	1,222	1,389	1,112	1,098	1,164	1,187
Large bus	106	121	99	118	98	95	81	86
Light truck	195	212	196	199	187	175	162	158
Medium truck	164	173	162	183	161	190	158	169
Heavy truck	194	194	211	221	201	222	200	214
Articulated	30	33	32	38	35	39	36	38
TOTAL	**4,818**	**5,223**	**4,820**	**5,540**	**4,899**	**4,993**	**4,789**	**4,853**

193. **Traffic Growth Forecasts.** The traffic on the project road can be subdivided into passenger and freight, while the latter is further divided into three main categories: (i) transit traffic; (ii) foreign trade traffic; and (iii) local or domestic traffic.

- Transit traffic is the traffic using Georgia's road corridor which connects the Black and Caspian seas. This traffic is associated to the main East – West and West –East foreign trade between Europe, America, Africa and the Mediterranean basin with the Caucasian and Central Asia region.
- Foreign traffic is the traffic of Georgia's foreign trade on the project road and having origin/destination in the Black Sea ports or the bordering countries (i.e. Russia, Turkey, Armenia and Azerbaijan).
- Local traffic is the traffic that having origin and destination in Georgia uses the project road.

194. For the purpose of determining future road traffic levels, the following assumptions have been made regarding traffic diversion and traffic growth:

- In the case of the new bypass, only about 10% of the traffic passing through the town of Igoeti is local and is expected to remain in the old alignment.
- Based on origin destination surveys carried out by the consultant, traffic diversion was estimated at 90%.

195. Passenger traffic is a function of GDP per capita, population growth, consumption and other factors such as car ownership. For the purpose of this analysis it was assumed that population decline due to migration will turn around and: (i) Georgia population will reach by 2015 the level of 1989 (i.e. 5.4 million); and (ii) from 2015 on, population will experience a steady growth rate of 0.4% per annum.

196. The method used in determining freight demand in each of the three classes identified consists in:

- Identifying foreign trade flows, using import export data
- Identifying transit flows analyzing custom data of transit flows
- Calculating internal freight flows subtracting to total flows (i.e., those resulting from traffic counts) foreign trade and transit flows.

197. The MoF elaborates projections of GDP using the standard IMF model, which allows short-term projections of all its components (Consumption, Investments, Exports and Imports). In real terms:

- GDP has been projected to grow 7% in 2007, 6% in 2008, and 5.5% in 2009 and 2010. Thereafter, GDP growth will gradually decline to a steady growth of 3% during the latter years of the project.
- Consumption is estimated to decline from almost 90% of GDP to about 80% from 2015 on in order to predict passenger demand.
- Imports and exports, used as the basis of foreign trade moved on the project road, are expected to gradually converge so that in 2030 imports will equal exports at 65% of GDP.
- Projections of transit traffic are strongly related to the economic development of countries using Georgian roads to haul their foreign trade. In particular, since 93% of the transit traffic is represented by West-East flows that are the imports of Central Asian countries, the projection of those flows were based on the assumption that the combined GDP of Central Asian countries would grow at 5% from 2005 to 2010, 4% from 2011 to 2020 and 3% thereafter.

C. Project Costs

198. **Investment Costs.** The upgrade to four lanes of the Igoeti-Sveneti Section within the existing alignment is estimated to cost US$41.95 million, and the construction of the Igoeti Bypass and rehabilitation of the local two-lane road in Igoeti village are estimated to cost US$25.7 million and US$1.08 million respectively in financial costs. The method adopted for identifying economic costs consisted in subdividing costs in broad categories, identifying for each category the structure of existing direct and indirect taxation and subsidies, calculating for each category the share of taxes/duties over financial costs, and elaborating economic costs applying the above shares to financial costs.

Table 9.3 - Conversion factors and economic value of investment

COST ITEMS	Conversion Factor	Agaiani Igoeti 12.2 Km	Igoeti By pass 4.2 Km	Igoeti Sveteni Km 20.4	TOTAL Km 36.8
Construction Works	0.78	10.96	10.80	18.31	40.07
Contingencies	0.78	0.72	1.14	1.20	3.06
Design	0.9	0.74	0.73	1.24	2.72
Work supervision	0.9	0.79	0.80	1.32	2.90
Land Acquisition	1	0.25	0.50	0.25	1.00
General expenses	0.837	2.17	2.14	3.63	7.94
Overheads	0.88	1.63	1.61	2.72	5.96
VAT (18%)	0	-	-	-	-
ECONOMIC COST		17.27	17.72	28.67	63.65
Investment Conversion Factor		0.68	0.69	0.68	0.68
Economic Unit Cost (m$/Km)		1.42	4.22	1.41	1.73

199. **Maintenance Costs.** As far as maintenance costs, tables 9.4 and 9.5 illustrate the financial and economic costs of the basic maintenance carried out in the "without project case" and the maintenance costs of the "with project' situation.

Table 9.4 - Maintenance Costs without the Project

ALTERNATIVE ZERO			
ELEMENTARY OPERATION	**SCHEDULE/RESPONSIVE**	**FINANCIAL COST**	**ECONOMIC COST**
Shoulders, drainage and snow removal	Schedule each year	400 US$ /Km	277 US$ /Km
Patching	Schedule each year	18.55 US$ /m2	12.8 US$ /m2
Double surface treatment 40mm	Schedule each 6 years	6.4 US$ /m2	4.4 US$ /m2

Source: World Bank, Report No. 27919-GE, and RDMED

Table 9.5 - Maintenance Costs with the Project

IMPROVED ALTERNATIVES			
ELEMENTARY OPERATION	**SCHEDULE/RESPONSIVE**	**FINANCIAL COST**	**ECONOMIC COST**
Shoulders, drainage and snow removal	Schedule each year	400 US$ /Km	277 US$ /Km
Patching	Schedule each year	18.55 US$ /m2	12.8 US$ /m2
Overlay 50mm	Schedule each 10 years	14.2 US$ /m2	9.6 US$ /m2

Source: World Bank, Report No. 27919-GE, and RDMED

200. **Road User Costs.** The HDM 4 model requires a set of inputs including unit labor costs for both crew and maintenance for each type of vehicle. Crew labor costs have been calculated using an average standard labor cost of US$200 per month, which implies an average cost of US$1.10 per hour (considering 22 days of work per month and 8 hours of work per day). Using the conversion factor for domestic labor (i.e., 0.7040), the economic cost of an hour of crew cost is US$0.77/hour. This value is assumed valid for minibuses and small trucks, while for medium trucks the value considered is of US$1.2 per hour and for large buses, medium trucks, heavy trucks and trailers the value assumed is US$1.62 per hour. Table 9.6 illustrates all operating characteristics used as input of HDM 4.

Table 9.6 - Operating Characteristics of Vehicle Fleet (financial values)

ITEMS	Car (2000 cc)	Mini Bus	Large Bus	Small truck	medium truck	heavy truck	Trailer
1-New vehicle market price (US$)	18,000	29,000	60,000	40,000	60,000	80,000	100,000
2-New tyre market price (US$)	50	78	150	150	180	225	225
3-Market maintenance labor per hour US$/hour	1.34	2.00	2.66	2.00	2.66	2.66	2.66
4-Market crew wages per hour (US$/hour	3.09	1.04	2.19	1.04	1.62	2.19	2.19
5-Fuel US$/litre	0.944	0.944	0.7778	0.7778	0.7778	0.7778	0.7778
6. LubricantUS$/litre	4.35	4.35	4.35	4.35	4.35	4.35	4.35
7-Average km driven per year	15,000	146,000	120,000	110,000	220,000	220,000	220,000
8-Average Annual Utilization (Hours/year)	900	3,000	3,000	750	3,000	3,000	3,000
9-Average Number of passengers	1.5	15	35	1	1	1	1
10-Average tons transported				2	10	18	20
11-Average Service Life	8	10	15	25	15	15	15
12-Average Age of Vehicles (Km)	120,000	1,460,000	1,800,000	2,750,000	3,300,000	3,300,000	3,300,000

D. Cost Benefit Analysis

201. The cost-benefit analysis is divided into three parts evaluating: (i) upgrade of 23 km Igoeti-Sveneti highway section from two to four lanes and rehabilitation of the existing two lanes; (ii) construction of Igoeti bypass; and (iii) rehabilitation of the existing local two-lane road in Igoeti. The following assumptions apply for all three benefit calculations.

202. **Common Assumptions.** For passenger unit time values it was assumed that 2/3 of passenger trips are for work and 1/3 for other purposes. Work time value is calculated considering both GDP projection and population projections. The criterion adopted for calculating passenger time value is based on the following assumptions:

- Employment, for the whole time horizon considered is 39.4% of population (as in 2004)
- Time value for working passenger is assumed equal to average GDP produced
- Hourly GDP per employed person is calculated assuming 220 working day in a year and 8 working hours per day
- Non working time value is assumed as 1/3 of working time value

203. Benefit calculations follow the standard methodology of comparing, over time, the operating performances between the scenario without the investment and that with the investment. Three main types of benefits are considered. The first type is associated to vehicle operating cost savings between the two scenarios; the second refers to the time savings for both passengers and freights transiting on the road sections considered and the third type is the scrap value of the investment.

204. **Igoeti-Sveneti Road Section Upgrade.** For this analysis, the without investment scenario is limited to rehabilitation of the existing road section and maintenance. The economic evaluation of Igoeti-Sveneti section results in satisfactory EIRR of 15.3% respectively. Table 9.7 below show the streams of costs and benefits for the upgrade of the Igoeti-Sveneti road section.

Table 9.7 - Cost-Benefit Streams: Upgrade of Igoeti-Sveneti Road Section (costs in million US$)

Year	Traffic	Investment Costs (W)	Investment Costs (WO)	Maintenance Costs (WO)	Maintenance Costs (W)	Saving in Maintenance	VOC (WO)	VOC (W)	TTC (WO)	TTC (W)	RUC (WO)	RUC (W)	Saving in RUC	Net Benefits
2007	10,353	0.000	0.000	0.003	0.000	0.00	21.106	21.115	9.734	9.734	30.840	30.848		0.00
2008	10,974	0.000	0.000	0.003	0.003	0.00	22.668	22.677	10.382	10.382	33.050	33.059		0.00
2009	11,632	9.984	2.519	0.003	0.003	0.00	24.256	24.264	11.076	11.076	35.332	35.339		-7.45
2010	12,330	23.248	5.877	0.003	0.003	0.00	25.706	25.714	11.803	11.802	37.509	37.516	-0.01	-17.38
2011	13,070	0.000	0.000	0.003	0.003	0.00	25.460	26.668	12.476	21.693	37.936	48.359	-10.42	-10.42
2012	13,854	0.000	0.000	0.003	0.003	0.00	27.018	28.961	13.309	8.886	40.327	37.848	2.48	2.48
2013	14,685	0.000	0.000	0.003	0.003	0.00	28.663	30.612	14.201	9.395	42.864	40.006	2.86	2.86
2014	15,566	0.000	0.000	0.003	0.003	0.00	30.426	32.448	15.161	9.958	45.587	42.407	3.18	3.18
2015	16,500	0.000	0.000	0.003	0.003	0.00	32.345	34.395	16.195	10.556	48.540	44.951	3.59	3.59
2016	17,490	0.000	0.000	0.003	0.003	0.00	34.520	36.459	17.311	11.189	51.831	47.648	4.18	4.18
2017	18,540	0.000	0.000	0.003	0.003	0.00	36.974	38.646	18.519	11.861	55.494	50.507	4.99	4.99
2018	19,652	0.000	0.000	0.003	0.003	0.00	39.680	40.965	19.832	12.572	59.512	53.537	5.97	5.97
2019	20,831	0.000	0.000	0.003	0.003	0.00	42.986	43.423	21.290	13.327	64.276	56.750	7.53	7.53
2020	22,081	0.000	1.656	0.003	0.003	0.00	47.333	46.028	22.994	14.126	70.328	60.155	10.17	11.83
2021	23,406	0.000	0.000	0.003	0.003	0.00	45.701	48.790	24.243	14.974	69.945	63.764	6.18	6.18
2022	24,810	0.000	0.000	0.003	0.003	0.00	48.537	51.718	26.014	15.872	74.551	67.590	6.96	6.96
2023	26,299	0.000	0.000	0.003	0.003	0.00	51.615	54.821	27.945	16.824	79.560	71.645	7.92	7.92
2024	27,877	0.000	0.000	0.003	0.003	0.00	55.053	58.110	30.055	17.834	85.108	75.944	9.16	9.16
2025	29,549	0.000	0.000	0.003	0.003	0.00	58.985	61.596	32.370	18.904	91.356	80.500	10.86	10.86
2026	31,322	0.000	0.000	0.003	0.003	0.00	63.311	65.292	34.921	20.038	98.233	85.330	12.90	12.90
2027	33,202	0.000	0.000	0.003	0.003	0.00	68.103	69.210	37.750	21.240	105.853	90.450	15.40	15.40
2028	35,194	0.000	0.000	0.003	0.003	0.00	73.471	73.362	40.915	22.515	114.386	95.877	18.51	18.51
2029	37,305	0.000	1.656	0.003	0.003	0.00	81.916	77.764	51.287	23.866	133.203	101.630	31.57	33.23
2030	39,544	0.000	0.000	0.003	0.003	0.00	82.988	82.430	67.666	25.298	150.654	107.728	42.93	42.93
2031	41,916	0.000	0.000	0.003	0.003	0.00	83.078	87.376	67.699	26.816	150.777	114.191	36.59	36.59
														15.30%
														10.0mln

Note: VOC is Vehicle Operating Costs, TTC is Travel Time Costs, and RUC is Road User Costs.

205. **Igoeti Bypass Construction.** The benefits from the construction of the Igoeti bypass were calculated using the standard methodology of comparing, over time, the operating performances between the scenario without the investment and that with the investment which in this case is the comparison of the incremental costs and benefits of building the by-pass rather than rehabilitating the existing alignement through the town of Igoeti. Thus, the following assumptions were made:

- The "without the investment" is the rehabilitation of the 2.7 km of existing local road in Igoeti village only;
- The "with the investment" is the construction of the four-lane bypass and rehabilitation of existing local road;
- The widening of the Igoeti-Sveneti road section to four lanes is assumed to take place and considered a sunk cost;
- 90% of the traffic is expected to divert to the newly constructed Igoeti bypass from the existing two-lane local road in Igoeti village;
- Traffic growth rates are assumed to be equal to those forecasts developed by the consultant in the feasibility study and described in section B of this Annex.

206. The economic evaluation of Igoeti bypass construction results in satisfactory EIRR of 13%. Table 9.8 below shows the streams of costs and benefits for this section.

Table 9.8 - Cost-Benefit Streams: Construction of Igoeti bypass (costs in million US$)

Year	Traffic	Investment Costs (W)	Investment Costs (WO)	Maint. Costs (WO)	Maint. Costs (W)	Saving in Maint.	VOC (WO)	VOC (W)	TTC (WO)	TTC (W)	RUC (WO)	RUC (W)	Saving in RUC	Net Benefits
2007	10,469	0.000	0.000	0.003	0.000	0.00	2.779	0.000	1.434	0.000	4.213	0.000		0.00
2008	11,097	8.500	0.755	0.003	0.003	0.00	3.000	0.000	1.538	0.000	4.538	0.000		-7.75
2009	11,763	8.500	0.000	0.003	0.003	0.00	2.732	0.000	1.610	0.000	4.342	0.000		-8.50
2010	12,469	0.000	0.000	0.003	0.003	0.00	2.900	2.591	1.721	0.898	4.622	3.489	1.13	1.13
2011	13,217	0.000	0.000	0.003	0.003	0.00	3.079	2.748	1.842	0.953	4.921	3.700	1.22	1.22
2012	14,010	0.000	0.000	0.003	0.003	0.00	3.270	2.913	1.972	1.010	5.242	3.923	1.32	1.32
2013	14,850	0.000	0.000	0.003	0.003	0.00	3.474	3.089	2.113	1.071	5.587	4.160	1.43	1.43
2014	15,742	0.000	0.000	0.003	0.003	0.00	3.693	3.276	2.266	1.136	5.959	4.411	1.55	1.55
2015	16,686	0.000	0.000	0.003	0.003	0.00	3.930	3.473	2.432	1.204	6.362	4.678	1.68	1.68
2016	17,687	0.000	0.000	0.003	0.003	0.00	4.193	3.684	2.614	1.277	6.807	4.961	1.85	1.85
2017	18,748	0.000	0.000	0.003	0.003	0.00	4.493	3.907	2.813	1.354	7.306	5.261	2.04	2.04
2018	19,873	0.000	0.000	0.003	0.003	0.00	4.827	4.145	3.032	1.436	7.859	5.581	2.28	2.28
2019	21,066	0.000	0.000	0.003	0.003	0.00	5.215	4.399	3.274	1.523	8.489	5.922	2.57	2.57
2020	22,330	0.000	0.001	0.003	0.003	0.00	5.682	4.672	3.547	1.616	9.229	6.288	2.94	2.94
2021	23,669	0.000	0.190	0.003	0.003	0.00	6.287	4.970	3.863	1.715	10.150	6.685	3.46	3.65
2022	25,090	0.000	0.000	0.003	0.003	0.00	6.188	5.297	4.140	1.820	10.328	7.118	3.21	3.21
2023	26,595	0.000	0.000	0.003	0.003	0.00	6.660	5.727	4.504	1.944	11.163	7.671	3.49	3.49
2024	28,191	0.432	0.000	0.003	0.003	0.00	7.183	6.333	4.915	2.182	12.098	8.516	3.58	3.15
2025	29,882	0.000	0.000	0.003	0.003	0.00	8.254	6.275	6.742	2.165	14.996	8.440	6.56	6.56
2026	31,675	0.000	0.000	0.003	0.003	0.00	8.529	6.674	7.089	2.297	15.618	8.971	6.65	6.65
2027	33,576	0.000	0.000	0.003	0.003	0.00	8.642	7.101	7.099	2.437	15.741	9.538	6.20	6.20
2028	35,590	0.000	0.000	0.003	0.003	0.00	8.777	7.557	7.111	2.586	15.888	10.143	5.74	5.74
2029	37,725	0.000	0.190	0.003	0.003	0.00	8.962	8.045	7.131	2.745	16.093	10.790	5.30	5.49
2030	39,989	0.000	0.000	0.003	0.003	0.00	8.244	8.566	7.069	2.916	15.313	11.483	3.83	3.83
2031	42,388	0.000	0.000	0.003	0.003	0.00	8.309	9.130	7.073	3.099	15.381	12.228	3.15	3.15
														13.30%
														1.5

Note: VOC is Vehicle Operating Costs, TTC is Travel Time Costs, and RUC is Road User Costs.

207. **Existing Road Rehabilitation in Igoeti.** To assess the economic benefits of rehabilitation of the existing two-lane 2.7 km road in Igoeti village we are comparing the without rehabilitation scenario (without investment) with the rehabilitated road (with investment). The following assumptions are made:

- The upgrade of Igoeti-Sveneti highway section and construction of Igoeti bypass are assumed to take place and are considered as sunk costs.
- 10% of the traffic is local and will remain on the existing two-lane village road;
- Traffic growth rates are assumed to be equal to those forecasts developed by the consultant in the feasibility study and described in section B of this Annex.

The economic evaluation of rehabilitation of local two-lane road in Igoeti village results in satisfactory EIRR of 12.9%. Table 9.9 below shows the streams of costs and benefits.

Table 9.9 - Cost-Benefit Streams: Rehabilitation of Existing Local Road vs. Limited Maintenance (costs in million US$)

Year	Traffic	Investment Costs (W)	Investment Costs (WO)	Maintenance Costs (WO)	Maintenance Costs (W)	Saving in Maintenance	VOC (WO)	VOC (W)	TTC (WO)	TTC (W)	RUC (WO)	RUC (W)	Saving in RUC	Net Benefits
2007	10469	0.000	0.003	0.003	0.000	0.00	2.46	2.458	1.011	1.011	3.469	3.469		0.00
2008	11097	0.636	0.003	0.003	0.003	0.00	2.65	2.649	1.083	1.083	3.732	3.732		-0.63
2009	1225	0.000	0.003	0.003	0.003	0.00	0.29	0.239	0.150	0.141	0.438	0.379		0.00
2010	1249	0.000	0.003	0.003	0.003	0.00	0.30	0.243	0.154	0.144	0.450	0.387	0.06	0.07
2011	1274	0.000	0.003	0.003	0.003	0.00	0.30	0.248	0.157	0.147	0.462	0.395	0.07	0.07
2012	1300	0.000	0.003	0.003	0.003	0.00	0.31	0.253	0.161	0.149	0.475	0.403	0.07	0.08
2013	1326	0.000	0.003	0.003	0.003	0.00	0.32	0.259	0.165	0.152	0.488	0.411	0.08	0.08
2014	1352	0.000	0.003	0.003	0.003	0.00	0.33	0.264	0.169	0.156	0.502	0.419	0.08	0.09
2015	1380	0.000	0.003	0.003	0.003	0.00	0.34	0.269	0.173	0.159	0.517	0.428	0.09	0.09
2016	1407	0.000	0.003	0.003	0.003	0.00	0.35	0.275	0.178	0.162	0.533	0.437	0.10	0.10
2017	1435	0.000	0.003	0.003	0.003	0.00	0.37	0.280	0.183	0.165	0.549	0.445	0.10	0.11
2018	1464	0.000	0.003	0.003	0.003	0.00	0.38	0.286	0.189	0.169	0.568	0.455	0.11	0.12
2019	1493	0.000	0.003	0.003	0.003	0.00	0.39	0.292	0.195	0.172	0.587	0.464	0.12	0.13
2020	1523	0.000	0.003	0.003	0.003	0.00	0.41	0.298	0.202	0.175	0.609	0.474	0.13	0.14
2021	1554	0.000	0.003	0.003	0.003	0.00	0.42	0.305	0.209	0.179	0.631	0.484	0.15	0.15
2022	1585	0.000	0.003	0.003	0.003	0.00	0.44	0.313	0.217	0.183	0.654	0.495	0.16	0.16
2023	1616	0.000	0.003	0.003	0.003	0.00	0.45	0.321	0.225	0.187	0.678	0.507	0.17	0.17
2024	1649	0.000	0.003	0.003	0.003	0.00	0.47	0.329	0.234	0.190	0.703	0.519	0.18	0.19
2025	1682	0.000	0.003	0.003	0.003	0.00	0.49	0.337	0.243	0.194	0.729	0.532	0.20	0.20
2026	1715	0.000	0.003	0.003	0.003	0.00	0.50	0.346	0.254	0.198	0.757	0.544	0.21	0.22
2027	1750	0.000	0.003	0.003	0.003	0.00	0.52	0.355	0.264	0.202	0.786	0.557	0.23	0.23
2028	1785	0.000	0.003	0.003	0.003	0.00	0.54	0.364	0.278	0.207	0.822	0.571	0.25	0.25
2029	1820	0.000	0.003	0.003	0.003	0.00	0.57	0.374	0.296	0.211	0.867	0.585	0.28	0.29
2030	1857	0.000	0.003	0.003	0.003	0.00	0.60	0.383	0.319	0.215	0.921	0.599	0.32	0.33
2031	1894	0.000	0.003	0.003	0.003	0.00	0.63	0.394	0.342	0.220	0.975	0.613	0.36	0.36
														12.90%
														0.06mln

Note: VOC is Vehicle Operating Costs, TTC is Travel Time Costs, and RUC is Road User Costs.

E. Sensitivity Analysis

208. The results of the sensitivity analysis show that a 20 percent increase in the cost of the civil works would result in a reduction of the EIRR for the upgrade of the 23 km Igoeti-Sveneti road section to 15.2%, the EIRR for the construction of the Igoeti bypass to 10.9%, and that for the rehabilitation of the existing two lane road in Igoeti to 11%. A reduction of benefits by the same ratio would result in an EIRR for the upgrade of the Igoeti-Sveneti section dropping to 10.9%, the construction of Igoeti bypass EIRR to 3.6%, and that for the rehabilitation of the existing two-lane Igoeti road to 8.2%. In the unlikely scenario of a substantial decrease in the expected traffic growth, the construction of the by-pass would become a few years premature.

Annex 10: Safeguard Policy Issues

GEORGIA: Second East-West Highway Improvement

A. Environmental Safeguards

209. **Environmental Safeguards – Overview.** Expansion of the E60 Highway between Agaiani and Sveneti has been divided into two phases: (1) Agaiani – Igoeti; financed under FEWHIP approved in November 2006, (2) Igoeti bypass and Igoeti – Sveneti is being financed under this Project: SEWHIP. During the preparation of the FEWHIP an Environmental Review of baseline information, key environmental sensitivities and an analysis of alternatives has been conducted for both Phase 1 and Phase 2 to assist in planning and scheduling. The Environmental Review also identified mitigation measures.

210. This Environmental Review concluded that the proposed project areas represent part of a considerably transformed landscape. No significant sensitive environmental receptors were identified through literature reviews and site visits and no long-term residual adverse impacts are therefore expected. The most sensitive area is at Igoeti where the construction of new bypasses and bridges is envisaged. This is because of the presence of archaeological sites, erosion and land stability issues, and natural (terrestrial and aquatic) habitats. At the same time, no 'showstoppers' were identified by this Environmental Review and anticipated impacts even in the Igoeti area are considered to be manageable through the application of conventional slope stabilization techniques, road design and construction standards; and good environmental practices. A summary of key sensitivities is provided below.

211. For this Project, Igoeti bypass and Igoeti-Sveneti Section, the section specific EA and EMP to mitigate and manage direct or indirect impacts of construction are prepared.

212. **Environmental Sensitivities – Igoeti bypass and Igoeti-Sveneti Section** – These sections of the Project are more sensitive than FEWHIP (which is a category B project) in terms of potential impact on the environment and cultural heritage. Most of implied environmental values have been classified as of medium or manageable sensitivity, and the cultural heritage values are classified as of high sensitivity in the above mentioned Environmental Review.

213. There are no protected areas traversed by the bypass or the highway, though surroundings of Igoeti bypass represent habitats for several endemic floral species that entered in the Red List and Red Book of Georgia, including Paeonia tenuifolia, P. carthalinica, P. majko, and P. caucasica as well as Hippophae rhamnoides, Amygdalus georgica, and Nitraria schoberi. Fragments of riparian forests are a home for mustelids and other small mammal species, including endemics of the Caucasus and 4 endangered species in Georgia as well as for bats entered into the Red List and Red Book of Georgia. Rivers Lekhura and Tortla are the important habitats for conservation of reophilous and non-reophilous fish, as they represent breeding grounds for this ichtyophauna. While sensitivity of these terrestrial and aquatic habitats to the project's impacts is estimated to be medium, they could be vulnerable to a variety of construction activities and to operation of the rehabilitated highway unless proper mitigation measures are taken.

214. The floodplain (Tugai) forests and river coast ecosystems in this area include: aspen woods (Populus hybrida), willow woods (Salix australior), oak woods (Quercus longipes) and elm woods (Ulmus suberosa). Small mammal species and mustelids (including endemics of the Caucasus and 4 endangered in Georgia) as well as bats included in the Red Book of Georgia have been observed in Tugai forest fragments. The River Ksani is a breeding ground for reophilous and non reophilous fish, and groundwater is located close to the earth's surface (0-3 m). The riparian forests and fish breeding grounds are not in the zone of direct impact but could be vulnerable to indirect impacts of construction activities, such as quarrying of gravel and inert construction materials.

215. The highway crosses several areas where the archaeological sites and monuments are located within the zone of the project impact.

216. Mitigation measures addressing all of the above sensitivities are developed and outlined in EMP. They include adherence to conventional good practice in conduct of civil works and in operating construction camps, proper management of solid waste and discharge, compliance with the national regulations on natural resource use and extraction, and, finally, restoration of soil surface and vegetation upon completion of works.

217. **Capacity of RDMED.** RDMED is responsible for the preparation of EA studies, for the construction and rehabilitation of roads, and for ensuring that these works comply with the Georgian legislation and the environmental and social requirements of the relevant donor organizations.

218. Within RDMED, the Division of the Project Analysis, New Technologies, and Environmental Protection under the Office of Technical Policy is responsible for all environmental issues related to highway development. This division is responsible for the review of the EAs and EMPs for RDMED projects and for monitoring the compliance of construction works (and associated contractors) with approved EAs, EMPs, environmental standards and other environmental commitments, including associated consultation and disclosure, liaison with relevant ministries and agencies, and supervision of the practical implementation of EMPs. There is one newly appointed environmental specialist employed in this Office, who has acquainted himself with job responsibilities, developed ownership of environmental documents prepared under FEWHIP as well as SEWHIP, and built working relations with a civil works contactor under FEWHIP. RDMED is further developing its capacity of handling environmental and social implications of roads development. The environmental specialist as well as three more staff of RDMED are benefiting from TA provided under the FEWHIP whereby on-the-job training and capacity building in the environmental and social areas are being provided.

B. Social Safeguards

219. The project plans to expand the existing two lane roads to four lane roads. Most of the land adjacent to the road that will be part of the expanded ROW belongs to the government; however, some private land, as well as public land leased to private users, will also be acquired. About 7 ha of land will be acquired from private owners/users, impacting about 95 households. A handful of commercial entities, including gas stands, restaurants and small kiosks, will be relocated. No physical relocation is expected to occur, though some part of residential plot will be acquired.

220. The RPF has already been developed and disclosed under the FEWHIP, which covers the section of the road that will be built under this project. The Georgian legal framework on land acquisition was assessed and found to be in line with OP 4.12, except that: (i) under the Georgian legislation, those who fail to have their ownership/use of land registered at the Public Registry will not be compensated for loss of assets; (ii) loss of income or assets of commercial entities without business license will not be compensated; and (iii) no clear procedure is provided for resettlement planning.

221. Under the FEWHIP, it was found that the majority of land owners have not registered their land holding at the Public Registry either at the time of land privatization or when they acquired land afterwards, either through sales or inheritance. Hence the majority of land to be acquired was without any legally valid owners from whom RDMED could purchase land legally. During the FEWHIP, RDMED first determined current land owners and helped them register land holding, to establish legal ownership of the land to be acquired, before starting negotiation for compensation. Similarly, several kiosks and other commercial entities have been found to be operating without full licensing requirements, though some of them run the business under tacit recognition by local authorities. RDMED is planning to set up rest areas under the FEWHIP, where these commercial entities will be accommodated without regard to legal status.

222. The same approach will be used for the SEWHIP. RDMED is undertaking topographical survey and taking census of individual land owners/ users and business entities, to determine the size and category of project impact. The result will be incorporated into the RAP, which will include procedures to help legalize land ownership and provide compensation at replacement cost, and to help existing commercial entities re-establish business activities.

223. Two restaurants, two gas stands and a dozen of kiosks which currently operate along the project road will be relocated. A rest area will be opened near the Igoeti bridge where all nearby kiosks nearby will be relocated and be allowed to continue business operation. The rest area will be built at both sides of the project road so the traffic of both directions can use the facility on the respective side. Access road will be built at two other locations to allow access to restaurants and gas stands. Income loss for these commercial entities during the construction of project road will be mitigated as contractors will be required to install temporary access roads.

224. RDMED will build overpasses or underpasses at some intervals to ensure the mobility of local population to the other side of the road, which also is considered to enhance road safety. A

school exists along the roadside, and RDMED, for the safety of school children, will relocate the school far from the road or install an underpass or overpass specifically for the school.

225. RDMED established a new unit that is responsible for land acquisition and environmental issues. Although their experience in compliance with Bank social safeguard policies has been limited, they worked closely with the consultant when the RAP for the FEWHIP was developed, and their capacity was significantly strengthened. Technical assistance has been provided under the FEWHIP to strengthen the capacity of RDMED in the implementation of land acquisition.

Annex 11: Project Preparation and Supervision

GEORGIA: Second East-West Highway Improvement

	Planned	Actual
PCN review	03/19/2007	03/21/2007
Initial PID to PIC	03/23/2007	03/31/2007
Initial ISDS to PIC	03/23/2007	03/31/2007
Appraisal	10/04/2007	10/04/2007
Negotiations	11/05/2007	11/08/2007
Board approval	01/29/2008	12/18/2007
Planned date of effectiveness	02/28/2008	
Planned date of mid-term review	12/01/2009	
Planned closing date	02/29/2012	

226. Key institutions responsible for preparation of the project:
Ministry of Finance
Ministry of Economic Development
Road Department of the Ministry of Economic Development
Ministry of Internal Affairs and Patrol Police

227. Bank staff and consultants who worked on the project included:

Name	Title	Unit
Olivier Le Ber	Project Team Leader	ECSSD
Elizabeth Wang	Project Co-Team Leader	ECSSD
Alan Ross	Traffic Safety Consultant	ECSSD
Anthony Bliss	Lead Road Safety Specialist	ETWTR
Arman Vatyan	Financial Management Specialist	ECSPS
Coral Bird	Team Assistant	ECSSD
Darejan Kapanadze	Environmental Specialist	ECSSD
Guranda Elashvili	Program Assistant	ECCGE
Hannah Koilpillai	Senior Finance Officer	LOAFC
Hans Jürgen Gruss	Chief Counsel	LEGEM
Jacques Buré	Senior Highway Engineer	ECSSD
Jesus Renzoli	Senior Procurement Specialist	ECSPS
Karl Skansing	Procurement Specialist	ECSPS
Marjorie Mpundu	Counsel	LEGEM
Mirtha Pokorny	Transport Economist	ECSSD
Nicholay Chistyakov	Senior Finance Officer	LOAFC
Rémi Cousin	Transport Consultant	ECSSD
Satoshi Ishihara	Social Development Specialist	ECSSD
Sevara Melibaeva	Junior Professional Associate	ECSSD
Tamara Sulukhia	Senior Infrastructure Specialist	ECSSD

228. Bank funds expended to date on project preparation:

1.	Bank resources:	US$184,000
2.	Trust funds:	US$0
3.	Total:	US$184,000

229. Estimated Approval and Supervision costs:

1.	Remaining costs to approval:	US$40,000
2.	Estimated annual supervision cost:	US$80,000

Annex 12: Documents in the Project File

GEORGIA: Second East-West Highway Improvement

230. **Project Information Document, Concept Stage, March 2007**

231. **Bank Staff Assessment**

- Identification Mission Aide-Memoire, February 2007
- Preparation Mission Aide-Memoire, April 2007
- Pre-Appraisal Mission Aide-Memoire, July 2007
- Appraisal Mission Aide-Memoire, October 2007

232. **Reports and Studies**

- *Trade and Transport Facilitation in the South Caucasus, Georgia Policy Note*, The World Bank, November 2003
- *Georgia – An Integrated Trade Development Strategy*, The World Bank, November 2003
- *Traffic Safety Program*, Technical Assistance to the State Department of Roads of Georgia, The Louis Berger Group, December 2003
- *Contribution to the Transit Strategy of Georgia,* NEA Transport Research and Training, June 2004
- *Preliminary Design and Environmental Assessment*, Agaiani-Sveneti section, Bonifica S.p.A. and Renardet Ingenieurs , September, 2006
- *Final Environmental Assessment*, Agaiani-Sveneti Section of E60 highway, Bonifica S.p.A., Tbilisi, October 23, 2006
- *Final Resettlement Policy Framework*, Agaiani-Igoeti section, Bonifica S.p.A., Tbilisi, October 23, 2006
- *Project Appraisal Document,* First East-West Highway Improvement Project, November 7, 2006
- *Pre-Interim Report, "Analysis of Traffic Safety Issues and Proposal of Solution Packages on the East-West Highway from Red Bridge to Poti and on other Main Roads",* SweRoad, June 2007

Annex 13: Statement of Loans and Credits

GEORGIA: Second East-West Highway Improvement

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P098217	2007	EDUC II (APL #2)	0.00	15.00	0.00	0.00	0.00	15.46	0.50	0.00
P083110	2007	HIGHWAY IMPROVEMENT 1	0.00	19.00	0.00	0.00	0.00	13.90	-2.57	0.00
P099808	2006	AVIAN FLU - GE	0.00	3.50	0.00	0.00	0.00	6.08	4.78	0.00
P098850	2006	INFRA PRE-INVEST FACILITY	0.00	0.00	0.00	0.00	0.00	4.07	2.98	0.43
P063081	2006	PUBLIC SECTOR FINANCIAL MANAGEMENT REF	0.00	0.00	0.00	0.00	0.00	3.02	1.70	0.00
P078544	2005	RURAL DEVT	0.00	10.00	0.00	0.00	0.00	8.24	4.18	0.00
P086277	2004	SEC/LOC ROADS	0.00	20.00	0.00	0.00	0.00	5.06	-4.28	0.00
P074361	2003	SIF 2	0.00	15.00	0.00	0.00	0.00	0.41	-0.85	0.00
P040555	2003	PRIM HEALTH CARE DEVT	0.00	20.30	0.00	0.00	0.00	11.84	7.55	7.77
P077368	2003	MUNI DEVT AND DECENTRLZN 2	0.00	19.41	0.00	0.00	0.00	0.00	-3.12	-3.12
P044800	2003	FORESTRY	0.00	15.70	0.00	0.00	0.00	10.63	3.24	0.00
P072394	2001	ENERGY TRANSIT INST BLDG	0.00	9.63	0.00	0.00	0.00	2.24	0.79	0.00
P055173	2001	EDUC I (APL #1)	0.00	25.90	0.00	0.00	0.00	2.28	-0.64	-0.64
P055068	2001	IRR/DRAIN REHAB (APL #1)	0.00	27.00	0.00	0.00	0.00	12.43	-5.51	-1.94
P054886	2001	ELEC MRKT SUPPORT	0.00	27.37	0.00	0.00	0.00	21.30	12.80	20.09
P048791	2001	PROT AREAS DEV (GEF)	0.00	0.00	0.00	8.70	0.00	1.94	1.93	0.23
P065715	2000	AGR RES EXT & TRG	0.00	7.60	0.00	0.00	0.00	0.69	0.38	0.38
P064091	2000	AGRIC RES EXT TRG (GEF)	0.00	0.00	0.00	2.48	0.00	0.02	0.03	0.02
		Total:	0.00	235.41	0.00	11.18	0.00	119.61	23.89	23.22

GEORGIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2000	Bank of Georgia	0.60	0.00	0.00	0.00	0.60	0.00	0.00	0.00
2003	Bank of Georgia	4.09	0.00	0.00	0.00	4.09	0.00	0.00	0.00
1998	Ksani	3.51	0.00	2.50	0.00	3.51	0.00	2.50	0.00
1999	ProCredit GEO	0.00	0.48	0.00	0.00	0.00	0.48	0.00	0.00
2001	ProCredit GEO	0.00	0.29	0.00	0.00	0.00	0.29	0.00	0.00
2002	ProCredit GEO	3.43	0.74	0.00	0.00	3.43	0.74	0.00	0.00
2004	ProCredit GEO	3.00	0.67	0.00	0.00	3.00	0.67	0.00	0.00
2006	TAV Holding	27.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	TBC Bank	0.00	0.86	0.00	0.00	0.00	0.86	0.00	0.00
2002	TBC Bank	1.36	0.00	0.00	0.00	1.36	0.00	0.00	0.00
2004	TBC Bank	0.50	0.00	4.00	0.00	0.04	0.00	4.00	0.00
2006	TBC Bank	0.00	8.75	0.00	0.00	0.00	8.73	0.00	0.00
2005	TBC Leasing	3.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00
	Total portfolio:	46.49	11.79	6.50	0.00	19.03	11.77	6.50	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
	Total pending commitment:	0.00	0.00	0.00	0.00

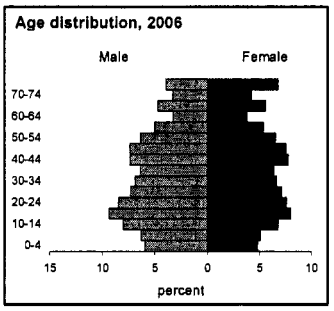
Annex 14: Country at a Glance

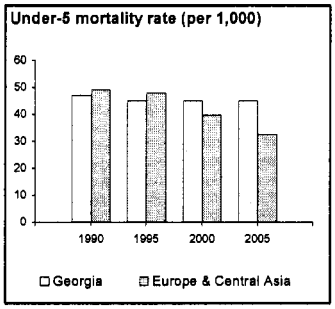
GEORGIA: Second East-West Highway Improvement

Georgia at a glance

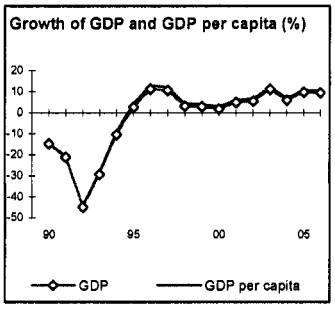
11/12/07

Key Development Indicators (2006)	Georgia	Europe & Central Asia	Lower middle income
Population, mid-year (millions)	4.4	460	2,276
Surface area (thousand sq. km)	*70*	24,114	28,549
Population growth (%)	-0.9	0.0	0.9
Urban population (% of total population)	*52*	64	47
GNI (Atlas method, US$ billions)	6.9	2,206	4,635
GNI per capita (Atlas method, US$)	1,560	4,796	2,037
GNI per capita (PPP, international $)	3,690	9,662	7,020
GDP growth (%)	9.4	6.8	8.8
GDP per capita growth (%)	10.4	6.8	7.9
(most recent estimate, 2000–2006)			
Poverty headcount ratio at $1 a day (PPP, %)	7	1	..
Poverty headcount ratio at $2 a day (PPP, %)	25	10	..
Life expectancy at birth (years)	71	69	71
Infant mortality (per 1,000 live births)	41	28	31
Child malnutrition (% of children under 5)	..	5	13
Adult literacy, male (% of ages 15 and older)	..	99	93
Adult literacy, female (% of ages 15 and older)	..	96	85
Gross primary enrollment, male (% of age group)	95	103	117
Gross primary enrollment, female (% of age group)	95	100	114
Access to an improved water source (% of population)	76	92	81
Access to improved sanitation facilities (% of population)	83	85	55





Net Aid Flows	1980	1990	2000	2006 [a]
(US$ millions)				
Net ODA and official aid	..	*0*	169	310
Top 3 donors (in 2005):				
United States	..	*72*	75	73
Germany	..	*15*	19	51
France	..	*0*	1	18
Aid (% of GNI)	..	*0.0*	5.3	4.9
Aid per capita (US$)	..	*0*	36	69
Long-Term Economic Trends				
Consumer prices (annual % change)	..	3.3	4.0	9.2
GDP implicit deflator (annual % change)	1.0	22.4	4.7	5.7
Exchange rate (annual average, local per US$)	..	0.0	2.0	1.8
Terms of trade index (2000 = 100)	..	..	100	103



	1980	1990	2000	2006	1980–90	1990–2000	2000–06
					(average annual growth %)		
Population, mid-year (millions)	5.1	5.5	4.7	4.4	0.7	-1.5	-1.0
GDP (US$ millions)	..	7,738	3,057	7,550	0.4	-7.1	7.8
		(% of GDP)					
Agriculture	24.3	31.5	21.9	13.0	..	*-1.4*	1.9
Industry	35.6	33.5	22.4	24.9	..	*11.2*	13.0
Manufacturing	27.9	24.2	18.4	17.1	..	..	7.7
Services	40.1	35.0	55.7	62.1	..	*18.0*	8.3
Household final consumption expenditure	55.8	64.8	78.8	81.5	..	*6.1*	-1.8
General gov't final consumption expenditure	13.0	10.2	9.2	9.2	..	*12.0*	4.1
Gross capital formation	29.1	30.7	21.6	27.3	..	-12.5	18.6
Exports of goods and services	..	39.9	35.7	43.9	..	*12.2*	5.4
Imports of goods and services	..	45.7	45.3	62.6	..	*11.2*	6.5
Gross savings	..	..	8.5	14.2			

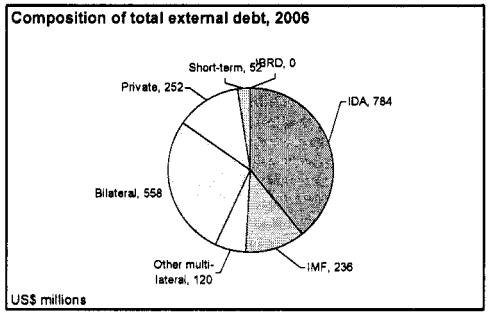
Note: Figures in italics are for years other than those specified. 2006 data are preliminary. .. indicates data are not available.
a. Aid data are for 2005.

Development Economics, Development Data Group (DECDG).

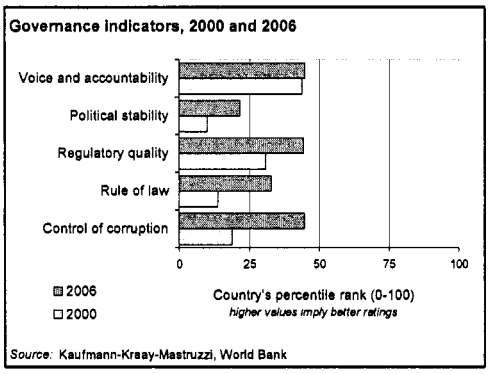
Balance of Payments and Trade	2000	2006
(US$ millions)		
Total merchandise exports (fob)	528	1,667
Total merchandise imports (cif)	937	3,686
Net trade in goods and services	-307	-1,416
Current account balance	-184	-1,044
as a % of GDP	-6.0	-13.8
Workers' remittances and compensation of employees (receipts)	274	*346*
Reserves, including gold	110	883

Central Government Finance		
(% of GDP)		
Current revenue (including grants)	15.5	25.5
Tax revenue	14.1	21.8
Current expenditure	18.1	23.0
Overall surplus/deficit	-3.5	-2.3
Highest marginal tax rate (%)		
Individual	..	12
Corporate	..	20

External Debt and Resource Flows		
(US$ millions)		
Total debt outstanding and disbursed	1,638	2,002
Total debt service	118	251
Debt relief (HIPC, MDRI)	–	–
Total debt (% of GDP)	53.6	26.5
Total debt service (% of exports)	9.6	6.6
Foreign direct investment (net inflows)	131	1,190
Portfolio equity (net inflows)	0	150



Private Sector Development	2000	2006
Time required to start a business (days)	–	16
Cost to start a business (% of GNI per capita)	–	10.9
Time required to register property (days)	–	9
Ranked as a major constraint to business (% of managers surveyed who agreed)		
Economic and regulatory policy uncertainty	..	*44.7*
Anticompetitive or informal practices	..	*38.2*
Stock market capitalization (% of GDP)	0.8	*5.5*
Bank capital to asset ratio (%)	*30.5*	*18.8*



Technology and Infrastructure	2000	2005
Paved roads (% of total)	*93.4*	*39.4*
Fixed line and mobile phone subscribers (per 1,000 people)	149	*337*
High technology exports (% of manufactured exports)	13.2	22.6

Environment		
Agricultural land (% of land area)	43	43
Forest area (% of land area)	39.7	39.7
Nationally protected areas (% of land area)	..	2.3
Freshwater resources per capita (cu. meters)	..	12,985
Freshwater withdrawal (% of internal resources)	*6.2*	..
CO2 emissions per capita (mt)	0.96	*0.82*
GDP per unit of energy use (2000 PPP $ per kg of oil equivalent)	3.3	*4.3*
Energy use per capita (kg of oil equivalent)	613	*626*

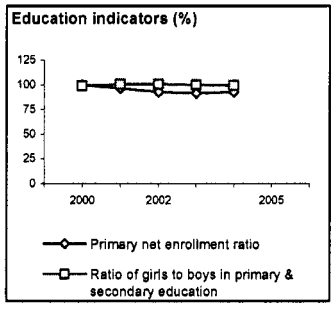
World Bank Group portfolio	2000	2006
(US$ millions)		
IBRD		
Total debt outstanding and disbursed	–	0
Disbursements	–	0
Principal repayments	–	0
Interest payments	–	0
IDA		
Total debt outstanding and disbursed	347	784
Disbursements	18	76
Total debt service	3	10
IFC *(fiscal year)*		
Total disbursed and outstanding portfolio	20	38
of which IFC own account	20	38
Disbursements for IFC own account	16	12
Portfolio sales, prepayments and repayments for IFC own account	0	6
MIGA		
Gross exposure	2	0
New guarantees	0	0

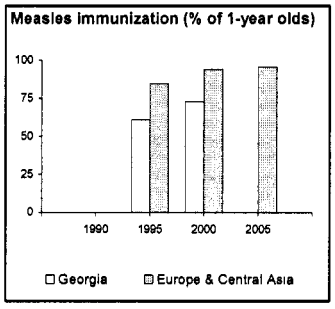
Note: Figures in italics are for years other than those specified. 2006 data are preliminary. 11/12/07
.. indicates data are not available. – indicates observation is not applicable.

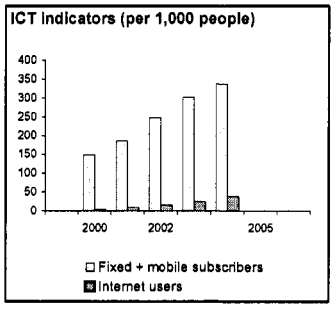
Development Economics, Development Data Group (DECDG).

With selected targets to achieve between 1990 and 2015
(estimate closest to date shown, +/- 2 years)

	Georgia			
Goal 1: halve the rates for $1 a day poverty and malnutrition	**1990**	**1995**	**2000**	**2005**
Poverty headcount ratio at $1 a day (PPP, % of population)	..	..	..	*6.5*
Poverty headcount ratio at national poverty line (% of population)	..	..	..	30.2
Share of income or consumption to the poorest quintile (%)	..	..	..	*5.6*
Prevalence of malnutrition (% of children under 5)	..	..	*3.1*	..
Goal 2: ensure that children are able to complete primary schooling				
Primary school enrollment (net, %)	*97*	..	100	*93*
Primary completion rate (% of relevant age group)	..	..	101	87
Secondary school enrollment (gross, %)	*95*	..	79	83
Youth literacy rate (% of people ages 15-24)	*100*	..	*100*	..
Goal 3: eliminate gender disparity in education and empower women				
Ratio of girls to boys in primary and secondary education (%)	*98*	..	99	*99*
Women employed in the nonagricultural sector (% of nonagricultural employment)	45	45	41	47
Proportion of seats held by women in national parliament (%)	..	*7*	7	9
Goal 4: reduce under-5 mortality by two-thirds				
Under-5 mortality rate (per 1,000)	47	45	45	45
Infant mortality rate (per 1,000 live births)	43	41	41	41
Measles immunization (proportion of one-year olds immunized, %)	*16*	61	73	*86*
Goal 5: reduce maternal mortality by three-fourths				
Maternal mortality ratio (modeled estimate, per 100,000 live births)	..	..	32	..
Births attended by skilled health staff (% of total)	..	..	*96*	..
Goal 6: halt and begin to reverse the spread of HIV/AIDS and other major diseases				
Prevalence of HIV (% of population ages 15-49)	..	..	..	0.2
Contraceptive prevalence (% of women ages 15-49)	..	..	*41*	..
Incidence of tuberculosis (per 100,000 people)	38	..	..	*82*
Tuberculosis cases detected under DOTS (%)	..	18	34	*79*
Goal 7: halve the proportion of people without sustainable access to basic needs				
Access to an improved water source (% of population)	..	..	*76*	..
Access to improved sanitation facilities (% of population)	..	..	*83*	..
Forest area (% of total land area)	..	..	39.7	39.7
Nationally protected areas (% of total land area)	..	..	..	*2.3*
CO2 emissions (metric tons per capita)	3.2	0.5	1.0	*0.8*
GDP per unit of energy use (constant 2000 PPP $ per kg of oil equivalent)	*1.2*	2.3	3.3	*4.3*
Goal 8: develop a global partnership for development				
Fixed line and mobile phone subscribers (per 1,000 people)	99	110	149	*337*
Internet users (per 1,000 people)	0	0	5	*39*
Personal computers (per 1,000 people)	..	..	24	*42*
Youth unemployment (% of total labor force ages 15-24)	..	..	21.1	27.9







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Development Economics, Development Data Group (DECDG).

MAP SECTION

IBRD 35490

GEORGIA
SECOND EAST-WEST HIGHWAY IMPROVEMENT PROJECT

ROAD SECTION UPGRADED:
- UNDER THE PROJECT (WB)
- UNDER THE FIRST EAST-WEST HIGHWAY IMPROVEMENT PROJECT (EWHIP-1) (WB)
- FINANCED BY THE GOVERNMENT OF GEORGIA
- CO-FINANCING BY THE KUWAIT FUND (KF) UNDER CONSIDERATION
- PUBLIC PRIVATE PARTNERSHIP (PPP) FINANCING UNDER CONSIDERATION
- EAST - WEST ROAD CORRIDOR

- MAIN ROADS
- RAILWAYS
- GLACIER AREAS
- RIVERS
- SELECTED CITIES
- NATIONAL CAPITAL
- INTERNATIONAL BOUNDARIES

0 15 30 45 60 75 KILOMETERS

RUSSIAN FEDERATION

To Soči

Gagra

Sokhumi

Tkvarčeli

Akarmaťa

Očamčira

Džvari

Mestia

Enguri

Zugdidi

Black Sea

Kulevi

Senaki

Chaltubo

Kutaisi

Tkibuli

Brotseula

Mukhiani

Sačhere

Kvirilk

Rioni

Chanistkali

Ambrolauri

Oni

To Vladikavkaz

Kazbegi

Aragvi

Poti

Samtredia

Zestaponi

Supsa

Ozurgeti

Kobuleti

Batumi

Sarpi

To Trabzon

Choroki

RUISI-AGARA (KF)

IGOETI-SVENETI (EWHIP-2) (WB)

AGAIANI-IGOETI (EWHIP-1) (WB)

Chinvali

Surami

Rikoti Tunnel

Ruisi

Agara

Sveneti

Igoeti

Natakhtari

Agaiani

Ahmeta

Telavi

Alazani

Lagodehi

Iori

AGARA-RIKOTI TUNNEL (PPP)

Khasuri

Gori

SVENETI-RUISI (GoG)

Mtkheta

Zagesi

Mtkvari (Kura)

Borjomi

NATAKHTARI-AGAIANI (GoG)

Bakuriani

TBILISI

Fonichala

Gurdžaani

To Zagatala

Snoris Tskali

Rustavi

Vale

Ahalcihe

Marneuli

Gardabani

Vakhtangisi

Dedopis-Ckaro

Ahalkalaki

Kazreti

Red Bridge

To Gazah

Ninocminda

To Alaverdi

To Gyumri

To Tašir

TURKEY

ARMENIA

AZERBAIJAN

RUSSIAN FEDERATION

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NOVEMBER 2007