Project Name: Lebanon-Beirut Urban Transport Project

Region: Middle East and North Africa

Sector: Urban Transport Sector

Project ID: LBPE34038

Borrower(s): Government of Lebanon

Implementing Agency: Council for Development and Reconstruction (CDR)

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Environmental Category: A

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Country and Sector Background

Beirut is the core of the service-based economy of Lebanon with one third of the population and contributing in excess of two thirds of the total value added in the economy. The city and its metropolitan area, however, suffer severe traffic congestion, a result of an extremely deficient transportation system. This implies high economic losses and deteriorating air quality. Sustained growth of a service-oriented economy such as Beirut’s is underpinned by efficient infrastructure, and the city critically needs to improve the efficiency of its urban transport system.

In its heyday, Beirut had an extensive urban transport system including a well-developed bus system and even a trolley-bus system. Due to the prolonged period of conflict this infrastructure deteriorated. Also, over the last two decades major changes have occurred in Lebanon’s demography due to urbanization and displacement of residents from the South and relocation of businesses from Beirut to various locations along the coast. These have resulted in important changes in traffic patterns throughout the Greater Beirut Area (GBA), which, in turn, generates severe congestion both in and around Beirut and particularly at the connections with the coastal highway to the north and south. The problem of congestion is exacerbated by a heavy reliance on the use of private cars, which amounts to approximately 300,000 cars for a population of some 1.2 million in the GBA (about 250 cars per 1000 inhabitants). Over 68 percent of total motorized person trips, more than half of which are home-to-work, are made by private car. Shared taxis and public bus services account respectively for nearly 15 percent and 17 percent of all trips. In addition, latent travel demand is high and would materialize with improving supply of transport capacity.

Project Objectives
For Beirut to regain its position as a competitive regional center for finance, trade, services and tourism, it needs to have an efficient transport system. To this end, the Government prepared a comprehensive Greater Beirut Area Transportation Plan (GBATP) which addresses the most serious urban transport issues, analyzes needed investments through the year 2015, and recommends a large (phased) investment program. The prioritization and phasing of this program will require a significant planning, consensus building, and resource mobilization effort.

The proposed Beirut Urban Transport Project — the first to be financed by the Bank in this sector in Lebanon, would help build the urban transport institutions needed to address the diverse transport issues the city faces and would support selected high priority investments recommended in the GBATP. The project is intended as the first of a series of projects to help Beirut meet the challenges of urban transport in a cost effective, sustainable and socially sensitive manner. This project therefore focuses on establishing key institutions and providing the most necessary infrastructural investments.

The project’s development objective is to provide the city of Beirut and the Greater Beirut Area (GBA) with the basic institutional framework, which it now lacks, and critical investments needed to maximize the efficiency of the existing urban transport infrastructure. These investments will provide the foundations needed for the future development of an efficient transportation system for the city and its metropolitan area.

The achievement of the project’s objective will be evaluated against the following performance indicators (by the end of the project): (a) effective traffic control system throughout the GBA, and a well-functioning Traffic Management Organization; (b) reduced congestion on major corridors; (c) effective on-street parking management, and significantly reduced parking violations in areas critical to efficient traffic operations; and (d) approval of an integrated urban transport strategy and accompanying transportation plans by the end of December 2002.

Project Description

Specifically, the project would seek to:

Improve traffic management by supporting: (a) establishment of a Traffic Management Organization (TMO), with ITS capabilities, as a metropolitan autonomous agency to monitor and control traffic operations within the GBA; (b) capacity building for traffic operations; and (c) installation of traffic signals and layout improvements for all significant intersections in the GBA (about 200 intersections).

Regulate on-street parking in selected zones through: (a) capacity building in the area of parking management; (b) installation of pay and display parking meters along with necessary parking signage to control about 3,500 on-street parking spaces; and (c) development of appropriate regulations, pricing and institutional arrangements for on-street parking control. Concession arrangements will be agreed upon by the Traffic Management Organization with the GBA municipalities for operating their on-street parking programs.

Improve traffic flow along seven major corridors (Beirut Entrances) by financing the construction of grade separation facilities at sixteen highly congested intersections.
Improve transport planning and organize public transport services through: (a) transport planning studies to formulate an integrated supply and demand oriented urban transport development strategy; and (b) capacity building in the areas of regulation and organization of public transport services.

Project Financing

The total project cost is estimated at US$115 million. The proposed IBRD loan would finance about US$65 million, cofinancing of about US$13 million is being sought and the Government would contribute the remaining US$37 million.

Project Implementation

The Council for Development and Reconstruction (CDR) would be the main executing agency and would have overall project implementation and coordination responsibility for the project. It would coordinate closely with the other responsible agencies, namely the Ministry of Transport, Directorate General of Land and Maritime Transport (DGLMT); the Ministry of Interior; GBA Traffic Police; the Governorate of Beirut; the Governorate of Mount Lebanon; and the GBA Municipalities.

CDR would also be responsible for all procurement activities in accordance with Bank’s procurement guidelines, with the exception of those related to the Component No. 4 Technical assistance to the Ministry of Transport, which would be the responsibility of the MOT Directorate General of Land and Maritime Transport (DGLMT). A Project Management Unit (PMU) would be established at CDR for overall project management/monitoring and to serve as focal point for all communication with the Bank. The project would support the PMU staffing with professionals to be recruited on performance-based contracts.

Project Sustainability

The sustainability of the GBA urban transport system would be enhanced under the project through: (a) building of institutional capacity in traffic management; (b) increasing the road network capacity by implementing the priority elements of the GBA transportation plan; and (c) enabling parking controls enforcement.

Project sustainability will depend on the quality of project implementation, the success of institutional reforms and the adequacy of available finance to support ongoing project operating and maintenance costs. With regard to the institutional reforms, the lead implementing agency CDR succeeded to involve all concerned agencies, which have agreed to work in a coordinated manner to achieve effective traffic management and parking controls. The maintenance costs for the three first years of operation for both the on-street parking meters and traffic control signals and equipment will be included in their procurement to allow securing stable budgets for operation and maintenance. Also public awareness campaigns will be conducted during project implementation for traffic and parking controls to ensure project sustainability.

A metropolitan Traffic Management Organization (TMO) will be established as an autonomous government agency to manage traffic and on-street parking within the Greater Beirut Area and keep parking revenues to cover part of the operation and maintenance costs of the proposed traffic and parking systems.
Lessons Learned from Past Operations in the Sector

The proposed project will be the first Bank-financed urban transport project in Lebanon, and its design takes into account the lessons learned from previous Bank wide urban transport operations. The main lessons reflected in the project design are the following:

A pragmatic approach was needed in designing the institutional components of the proposed project, as experience shows that it takes more than one project to achieve a sustainable institutional structure.

To reinforce project ownership and build strong understanding of key sector issues the project preparation has been carried in close coordination with all stakeholder agencies.

It is essential for implementation of traffic and parking management schemes and policies to secure political commitment to minimize risks of cancellation of components.

Necessary budgets for efficiently operating and maintaining the traffic management system during the project implementation period, including the Traffic Management Organization core staffing and operating costs, are included in the project costs. During negotiations assurances would be sought that after project completion adequate O&M budgets will be secured on a continuing basis.

To ensure timely implementation of this project, detailed engineering design of civil works for the project’s first year sub-components have been completed. The recruitment of a Procurement/Construction Management Specialist financed by the project, will be critical for the timely preparation of all contracts.

The project would provide a demonstration of the integrated use of environmental assessments, resettlement action plans and social assessments in the planning and implementation of a project. It would also include public information and outreach activities.

Environmental Aspects

A detailed environmental assessment in compliance with the provisions of OD 4.01 for a "Category A" project was prepared for the Project. It includes an analysis of planning and design alternatives, development of an environmental mitigation and monitoring plan and an extensive public consultation. It has also introduced the use of public participation as an element of the environmental assessment process for investments in the transport sector. The environmental assessment was submitted to the World Bank in advance of the appraisal and made available at the Info Shop and at a number of locations in Beirut. The Executive Summary has also been distributed to the Executive Directors of the World Bank.

Environmental Impacts. The environmental assessment found that the Project would result in an overall improvement in urban environmental quality in greater Beirut as the result of reduced traffic congestion in the vicinity of major intersections and their access routes and by complementary improvements in parking that would also improve overall traffic flow. The primary benefits
would come from reduced noise from vehicles, especially horns, lower emissions from quicker moving vehicles and reduced light at street level in the evenings. Over the medium-term, the phasing out of leaded gasoline and reduced use of diesel fueled trucks would also contribute to improvements in air quality. The primary adverse environmental impacts are associated with the construction period for grade separation improvements, which would include temporary increases in noise, dust, sedimentation, light and vehicle emissions due to demolition and construction activities. In some cases temporary changes would also be made in storm water drainage patterns. These impacts can be mitigated by careful planning of the staging used for construction and rerouting of traffic, careful supervision of construction activities and use of environmental monitoring.

An environmental mitigation and monitoring plan has been prepared as an element of the Project. Mitigation actions would focus on environmental supervision of the construction contractors and actions to reduce traffic flow problems during the construction phase. The monitoring plan would provide for quality-controlled, regular air quality measurements, in order to provide baseline and trend data to support management decisions. In addition, the project includes a policy study for urban air quality that would review fuel improvements, vehicle emissions testing, and emission related taxes and registration fees. It would also support a program of training sessions in air quality management and environmental monitoring targeting the needs of national and local government officials, consulting firms, construction contractors, and local NGOs.

Cultural Heritage. The Beirut urban area has an extensive history of human settlement and includes a wide range of archaeological and historical sites. Such sites may exist buried under the intersections at which grade separation improvements are planned. In order to address this concern the environmental assessment, consistent with the provisions of Operational Policy Note 11.03, "Cultural Property" contained an evaluation of potential impacts to cultural heritage, which included site specific evaluation of potential risks, provisions for archaeological investigations and monitoring during the construction phase and use of "archaeological chance find" procedures in case significant materials are encountered.

Program Objective Categories

The operation would contribute to the following Bank Program Objective Category: (EN) environmentally sustainable development.

Project Benefits and Target Population

The 1.2 million GBA’s inhabitants, constituting about a third of Lebanon’s population, are the project’s target population. The project would help provide much needed roadway capacity improvements for the GBA. Specifically, the project would help reduce the ever-worsening traffic congestion in the GBA and increase the mobility of its inhabitants. Significant savings in travel time and costs are expected as the direct outputs of the proposed investments. An enhanced urban transport system and better organized bus services will increase efficiency of urban functions affecting the well-being of the GBA population and businesses, and improve the mobility of urban poor and woman workers.
Project Risks

In addition to potential geopolitical instability in the region, the project faces the following main risks: (a) institutional barriers to effective traffic management and parking controls; (b) public resistance to parking controls; (c) insufficient resources to operate and maintain the GBA traffic management system; and (d) risk of extended traffic disruptions during construction. During preparation the Bank and the Borrower agreed on specific measures that would minimize these risks.

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Note: This is information on an involving project. Certain components may not be necessarily included in the final project.

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