

協議議事録

在トルコ日本国大使館

日時：2005年11月10日（木） 9時45分-10時20分

場所：大使館

出席：林公使参事官 門間書記官

小山総括 梅永副総括 室岡 JICA 社会開発部職員

概要：以下のとおり。

<JICA 調査団>

- ・ 予算制約上、要請にあるようなフルスケールの都市交通マスタープランの実施が困難である。予算内で出来る限りのことを行う。
- ・ イスタンブール市側は、1997年に都市交通マスタープランをイスタンブール工科大学と連携して策定する等、人材リソースが豊富である。協働で調査を実施していくことでコストシェアリング等が図れる可能性もある。

<大使館>

- ・ イスタンブールの交通事情は、そのインパクトの大きさからイスタンブール市のみならずトルコ国としても関心が非常に高い。
- ・ 調査団滞在中はマスコミへの対応等も予定されている。広報の機会をうまく活用して欲しい。
- ・ 第3ボスポラス橋（構想段階）については、環境面で賛否様々な議論がある。Traffic Demand Management（TDM）等の導入を含む、メリハリをつけた調査・提案を行って欲しい。
- ・ 現イスタンブール市長（トルコ国内では閣僚クラス扱い）は建築出身であり本件に対しても関心が高い。市長にも直接・間接的に情報交換が出来るようにしておくことが重要。
- ・ 国家計画庁（State Planning Organization）は予算計画・配分の権限があり、（事業規模にもよるが）運輸交通インフラ整備に係る投資計画を評価している。
- ・ 他ドナーとしては、世界銀行や European Investment Bank（EIB）が交通分野への援助を行っている。

以上

JICA トルコ事務所

日時：2005年11月10日（木） 10時45分-11時30分

場所：JICA トルコ事務所

出席：中村トルコ事務所長 梅永副総括 門間日本大使館書記官
小山総括 室岡 JICA 社会開発部職員

概要：以下のとおり。

<事務所>

- ・ 先に行われた大使と市長の会談では、市長から、ゴミ、環境、都市交通の問題が、イスタンブールの抱える大きな課題であるとの話があった。
- ・ 本調査で提案する Action Plan では、JBIC 有償資金協力等過去・現在の日本の協力と整合性のとれるものとして欲しい。
- ・ 現在様々な開発プロジェクト、交通プロジェクトが進行中あるいは構想段階にある。それらの情報をしっかり集め対応して欲しい。
- ・ イスタンブール市は財政基盤が強く、独自の力で資金を借り入れることが出来る。最近はドバイの資本も流入してきており、民間資本を含めた調査結果活用のためのリソースは豊富である。
- ・ 世界銀行はイスタンブールプロビンスに対し約400億円（Japan Fund100億円）投資している。

以上

世界銀行トルコ事務所

日時：2005年11月10日（木） 12時-13時

場所：世界銀行トルコ事務所

出席：Michel Audie, Lead Transport Specialist, Infrastructure and Energy Department, Europe and Central Asia Region

Richard C. Podolske, Urban Transport & Planning Consultant

Alptekin Orhon, Senior Financial Analyst

小山総括 梅永副総括 室岡 JICA 社会開発部職員 門間日本大使館書記官

概要：以下のとおり。

<調査団>

- ・ 本調査団の目的は、イスタンブール市都市交通マスタープランの Scope of Work を検討することである。
- ・ イスタンブール市は都市交通の問題を解決するために、自動車交通から公共交通へのシフトを目標としている。
- ・ 予算的な制約もあり、要請にあるようなフルスケールでの需要予測を行うことは困難な状況である。
- ・ 現在 Initial Environment Evaluation (IEE) で連携を提案頂いているが、その件に限らず関連する情報の交換を行いたい。

<世界銀行>

- ・ 様々な ongoing のプロジェクトがある中で、長期の需要予測に多大な労力を投入することは無駄である。一つのプロジェクトが終了したら人・モノの流れが大きく変化することもあり得る。
- ・ イスタンブール市は日本に対しては1997年の調査の update を希望している。現在の TOR よりも specific なものを期待しているかもしれない。現地でよく確認されたい。
- ・ 様々なステークホルダー、関連部局が都市交通に直接・間接的に関わっている。現在、交通庁（イスタンブール都市圏に特化したものかどうかは不明）の設立に関する法律が国会で審議中のはずである（要確認）。
- ・ 現在は提案されるプロジェクトが特定されていないため具体的な花氏は困難であるが、IEE の連携の可能性はビデオ会議等を活用しつつ今後とも検討していきたい。提案されるプロジェクトへの融資も検討可能。
- ・ 第3ボスポラス橋へのコメントは特にない。トルコ側が決めることである（あまり良案とは考えていない様子）。

以上

運輸省鉄道港湾空港建設総局 (DLH)

日時：2005年11月10日(木) 14時-15時

場所：運輸省鉄道港湾空港建設総局長室

出席：Ahmet Arslan, General Manager, General Directorate of Railways, Ports, and Airports
Construction, Ministry of Transport
Hamza Sen, Deputy General Director
Musa Ozalp, City and Transport Planner
小山総括 梅永副総括 室岡 JICA 社会開発部職員 門間日本大使館書記官

概要：以下のとおり。

<調査団>

- ・ 目的説明
- ・ イスタンブール市との協議では、提出された要請書に基づき議論する。

<DLH>

- ・ 国所管の鉄道・港湾・空港関連プロジェクトに関しては運輸省は予算確保前の最終審査を行う機関である。イスタンブール市における都市交通はイスタンブール市が所管しているため、イスタンブール市で情報収集されたい。
- ・ 1997年実施されたイスタンブール市都市交通MP調査には関与していない。
- ・ トルコ国鉄に関し、建設は国、運営(料金設定等含む)はトルコ国鉄(TCDD)が行っている。
- ・ ヨーロッパ側とアジア側の2つの空港を結ぶ鉄道を計画するアイデアを持っている。
- ・ 都市交通は様々な機関が複雑に絡み合っているため実施に結びつきにくい。現在イスタンブールの都市交通を専門的に所管する組織を設立する動きがある(要確認)。

以上

国家計画庁 (SP0) 経済調整局

日時 : 2005 年 11 月 10 日 (木) 15 時 30 分-16 時 30 分

場所 : 国家計画庁経済調整局

出席 : Dr. Pelin Kale Attar, General Directorate of Economic Sectors and Coordination, Prime Ministry
State Planning Organization

Katsumi Uchida, General Directorate of Social Sectors and Coordination

小山総括 梅永副総括 室岡 JICA 社会開発部職員 門間日本大使館書記官 内田専門家 (援助調整)

概要 : 以下のとおり。

<調査団>

- ・ 目的説明
- ・ 様々なプロジェクトが進行中である中、長期的な需要予測が妥当であるかどうか議論していきたい。

<SP0>

- ・ 1997年のMPは急激な土地利用の変化・人口増により既に陳腐化している。
- ・ 現在イスタンブール市では新しい土地利用計画を策定中と聞いている (要確認)。
- ・ しっかりした需要予測に基づき計画して欲しい。97年の調査は不十分だった (既に陳腐化しているというのがその理由の一つ)。
- ・ イスタンブール市は資金が潤沢にあり財務状況も良く独自の力で融資を受けることが出来る。
- ・ バス等市が所管する交通施設インフラに係るプロジェクトの実施は規模にもよるが中央省庁とは独立して実施することが可能である (要確認)。
- ・ 鉄道等のプロジェクトはDLHがモードの選択の適正やF/Sの妥当性等を含む技術的な審査を行い許可が必要となる。
- ・ 外国からの援助についてはイスタンブール市に対する融資であってもSP0の審査が必要となる (政府が返済を保証するため)。
- ・ SP0の審査はGeneral Policyと呼ばれるPolicyに基づくもので、フィージビリティスタディがマスタープランスタディに位置付けられているかどうか等を確認することになる。
- ・ 2005年夏に決定されたMetropolitan Municipality Law (Law 5216)は、各自治体及びイスタンブール市のTransportation Coordination Centerは、20以上の部局にまたがる都市交通の権限に対する調整とコミットメント機能を与えた (要確認)。

以上

公共事業住宅省道路総局

日時：2005年11月11日（金） 10時-11時

場所：道路総局会議室

出席：Cahit Turhan, Director General V, General Directorate of Highways

S. Ozcan Erol, Division Director, Motorways Bridge Division

Azmi Tras, Motorways Bridge Division

小山総括 梅永副総括 室岡 JICA 社会開発部職員 門間日本大使館書記官 内田専門家（援助調整）

概要：以下のとおり。

<調査団>

- ・ 目的説明
- ・ イスタンブール都市交通の課題について、自動車交通の観点から意見交換を行いたい。

<道路総局>

- ・ トルコ人は概して自由奔放であり、行動が規制されることを好まない。イスタンブール市が標榜する自動車利用から公共交通へのシフトは住民の理解を得たとしても、行動に反映されるには多くの困難があるだろう。
- ・ 都市交通ニーズの正確な把握が何より必要である。そのためには正確な OD 調査、Trip にかかる時間の調査等も不可欠であろう。
- ・ 調査後に提案されるプロジェクト及び改善事項は物理的にも心理的にも受け入れられないといけない。
- ・ イスタンブール市のチリ的な制約条件は道路プロジェクトの実施を困難にしている。今回の日本の調査から導かれる提案も制約を受けるだろう。
- ・ イスタンブール市は黒海方面に拡張していくことが予想されており、またそれが必要である。
- ・ KGM はインタープロビンスの自動車道路を所管している。イスタンブール市内の自動車道路については維持管理をイスタンブール市に移管している。
- ・ 第3ボスポラスは現段階では、ルートも絞りきれていない。必要な政治的な判断が下されれば直ぐにも計画準備に入れるようにしている。
- ・ 必要な情報やレポートの取得については申請レターを提出して欲しい。

以上

環境森林省

日時：2005年11月11日（金） 16時-17時

場所：環境森林省 EIA 部長室

出席：Mustafa Satilmis, Head of EIA Department, Ministry of Environment and Forestry
小山総括 室岡 JICA 社会開発部職員

概要：以下のとおり。

<調査団>

- ・ 目的説明
- ・ イスタンブール都市交通マスタープランを実施する上で、必要となるであろう環境社会配慮事項について意見交換を行いたい。

<環境森林省>

- ・ Regulation on Environmental Impact Assessment は必要な手続について記載している。
- ・ 環境影響評価は Annex 1（省庁関連案件+例外）、Annex 2（プロビンス案件）にカテゴリー区分され、中央の環境省は Annex 1 と 2 の一部を対象に EIA を実施する。残りはプロビンスへの出先局が行う。
- ・ Annex 2 について詳しく説明すると、国直轄の 81 プロビンスのうち 30 プロビンスが該当し、残りの 51 プロビンスについてはキャパシティ的制限からは国が直轄で実施する。ただし、Annex 2 に該当するプロジェクトでも、例えば港湾では 1, 350 トン以上の船舶用岸壁、空港では 2, 100メートル以上の滑走路のプロジェクトについては Annex 1 扱いとなる。
- ・ イスタンブール市（Municipality）の場合については自治を有しているため Annex 2 とは別の扱いになる（要確認）。
- ・ 住民移転に関し、Land Acquisition Law により制度化されており、Ministry of Public Works and Housing が所管している。
- ・ 歴史的建造物の保全などについては、Ministry of Culture and Tourism が所掌している（Law 32、60、86）。
- ・ EU 統合にむけた環境関連法規の見直しは終了した。

以上

イスタンブール市交通局

日時：2005年11月14日（月） 10時30分-12時

場所：イスタンブール市

出席：Dr. Rafet Bozdogan, Head of Transportation Department, IMM

Mr. Ihsan Hadi Karadeniz, Transportation Department

Dr. H. Murat Celik, Head, Transportation Group, Istanbul Metropolitan Planning & Urban Design Center (IMP)

小山総括 梅永副総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ Istanbul Metropolitan Planning and Urban Design Center (IMP)は4ヶ月前（2005年7月）に設立された。公示された業務を受注した民間企業により運営されている。都市計画の作成が中心業務であるが、その一部として都市交通計画も担当しており、国と自治体の交通関係者が広く関与している。
- ・ 同センターでは、2006年2-6月の間に、スタディエリアの世帯から2%を抽出してホームインタビュー調査を実施する予定である。
- ・ 同センターでは現在最も進んでいると言われている”TransCAD”モデル（GISと併用）を使用する。同モデルはマイクロ・シミュレーションにも拡張可能である。
- ・ 2006年1月から1年間かけ、フェーズ1では各種の交通関連調査とModel Calibrationを行い、その後、フェーズ2ではマスタープラン作成を行う予定である。
- ・ 世銀はイスタンブール都市交通計画に大きな興味をもっている。UNDPも興味をもっており協力を申し出ている。
- ・ イスタンブール市は世界的にも国内的にも重要な都市であり、現在の首相（前イスタンブール市長）が第3ボスフォラス架橋を含めいろいろな形で関与している。
- ・ イスタンブール地下鉄の建設単価はUS\$40 million/kmである。

<ここから交通部長 Dr. Rafet Bozdogan 参加>

- ・ JICA プロジェクトは IMM が実施しようとしている業務とオーバーラップしている。両者のコーディネーションが重要である。
- ・ イスタンブール都市計画では短期・中期の改善が重要であり、その上で長期的な改善を検討していくことが必要と考えている。イスタンブール市は地理条件が厳しく、集水能力が脆弱である。現在の都市域だけで増加人口を受け入れることには限界があり、都市域は必然的に北に拡張していくことになる。これを支える公共交通サービスの提供が必要である。
- ・ 1997年のマスタープランはインタビュー調査の抽出率が極めて低く信頼性にかける面がある。4%に高めれば信頼性は著しく向上するだろう。
- ・ ボスフォラス大学が”Congestion Management Project”をスタートさせた。
- ・ 当調査の関係で次の3点を詰めることが必要：①調査の実施スケジュールを決める、②マスタープランの内容を詰める、③具体的な実施方法を検討する。その上で、市と JICA の分担を決め、分担の内容を詰めていきたい。
- ・ JICA 側から問題構造分析を中心に短期改善策を重視する、交通調査・交通需要予測などを必要とする長期計画は JICA のスコープ外とする考えを伝え、S/W を詰めていくこととしたい旨提案し今後意見交換していくことを確認。IMP では、ホームインタビュー調査を実施し、その結果をモデ

ルに表現していきたい、その上で将来の交通施策について検討したいと考えている。

- ・ 2025年を目標年次とする土地利用計画を2006年末までに完成する予定である。

以上

イスタンブール工科大学

日時：2005年11月14日（月） 14時-15時30分

場所：工科大学会議室

出席：Prof. Haluk Gercek, Transportation Division

小山総括 梅永副総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ IMP が数ヶ月前に設立された。ここではメトロポリタンおよびリージョンの調査を行いデータや計画のアップデートを行う予定であり、“Transport Master Plan 1997” のレビューも予定されている。ハルク教授はアドバイザーとして関係しており、週 2 日、IMP に出向いている。交通分野の様々な関係者が関っており、調整と協力が必要である。英国その他のコンサルタントも IMP との関係で働くことを望んでいる。
- ・ 道路ネットワーク、公共交通ネットワーク、ホームインタビュー調査などのデータを更新し、“TransCAD” を使ってキャリブレーションする予定である。1996 年に実施されたホームインタビュー調査は 38,000 人で 0.4% の抽出率であり、もっと拡充することが必要である。出来れば 4% で行いたい、2% 程度でもかなり信頼性は高いと考える。
- ・ 1999 年のイスタンブール地震により、その後、人々が北に移動するようになり土地利用に変化が生じている。このような点を含め 1997 年マスタープランのアップデートが必要である。
- ・ イスタンブールのモデリングでどのモデルを使うかは大きな問題である。現在は、最も先進的な TransCAD の使用を考えており、JICA の協力であっても JICA モデル（ストラダ）を使用するのは問題だろう。
- ・ 交通計画は “try to make many people happy” を目的にしているはずだが、現実には “not make happy” になっている。車社会を優先する交通から「人々の生活を優先する交通」に換えていくことが必要である。フライオーバー、第 3 ボスフォラス架橋などは自動車オリエンテッドであり、このようなアプローチを変えていくことが必要である。バス専用レーンなど公共交通を優先する施策が重要である。しかし、行政的には公共交通の整備は絶えず後回しになってきた。
- ・ イスタンブールには新しいショッピングセンター、リゾートタイプの住宅などが次々に建設されている。これにより発生集中する交通が混雑を引き起こし、対策がとれなくなっている。10-15 年前にアジア開発銀行のコンサルタントをしていたことがあるが、イスタンブールの交通もマニラの交通に近づいてきているようだ。
- ・ イスタンブールの交通には 17 以上の機関が関係している。これらをいかに調整するかが重要である。①鉄道・メトロ・LRT、②フェリー・シーバス、③市バス・民間バスなど各種の交通サービスが 1 つのアンブレラのもとに供給されるべきである。
- ・ イスタンブールでは NGO も意思決定に関っている。Urban Planning Office は NGO を招いて意見交換を行っている。
- ・ “Transport Master Plan 1997” は公共交通、特に鉄道を重視した Sustainable Transport System を提案しており、3 年毎に見直すべきとしていたが、見直しは全くされなかった。
- ・ イスタンブールの南部は歴史・文化的に重要なエリアであり大切に保存することが必要である。市域の拡大は北部に向かわざるをえない。しかし、北部も自然資源・水資源の場として重要であり、環境保全が重要である。
- ・ ボスフォラス海峡を挟んで西側には人口の 65% が居住し、雇用の 75% が集中している。したがっ

て、東部から 10%相当の通勤交通が集中している。ボスフォラス架橋は通勤交通で毎日渋滞を繰り返している。東側での雇用創出が必要である。

- ・ イスタンブール市の鉄道は全ての軌道系交通機関を含んで総延長 230km である。マルマライ鉄道の建設が進められており、また、アジアサイドで 21km の鉄道延伸計画が進められている。鉄道網の整備は遅れてはいるが、マスタープランの提案に沿って進展しつつある。
- ・ バスは計画的に整備されているとは言えないが 1 日 250 万人の旅客を輸送している重要な公共交通である。バス輸送の改善に対しては、UNDP が” Sustainable Mobility in Istanbul” というキャッチフレーズのもとに協力を申し出ている。UNEP とともに環境重視の提案であり、ボスフォラス架橋にバス専用レーンの設置を提案している。UNDP の提案は次の 7 つのコンポーネントを含んでおり、運輸省・環境省と協力しつつ 2006 年に開始したいとしている：

- (1) Improvement of land transport
 - (2) Improvement of public transport services
 - (3) Introduction of segregated bus lane
 - (4) Traffic Demand Management including congestion charges & parking system
 - (5) Clean fuel
 - (6) Improvement of decision making system
 - (7) Strategic environment strategy
- ・ JICA 調査では、ステアリング・コミティよりも参加型のセミナー・ワークショップを重視した方が良いのではないかと。限られたメンバーによる意思決定ではなく、できるだけ多くのステークホルダーの意見を尊重して決定することが望ましい。
 - ・ 1997 年マスタープランの貨物 OD 表はスクリーンラインでの路側インタビューによるデータをベースにしている。現在は、貨物会社・ロジスティック会社から貨物の入出荷データを入手するようにしている。1999 年地震後に OD 調査は実施されていないが、地震後の変化を知るためにもできるだけ早期に OD 調査を実施することが必要である。
 - ・ イスタンブールの 1 日あたり公共交通サービスの利用者は次のとおりであり、軌道系公共交通機関の整備につれてバス、ミニバスからのシフトが生じている：
 - ・ (1) 軌道系： 600,000
 - ・ (2) バス： 2,000,000-2,500,000
 - ・ (3) ミニバス： 2,000,000
 - ・ (4) フェリー： 250,000
 - ・ 合計： 5,000,000

以上

イスタンブール市 IMP

日時：2005年11月15日（火） 10時-12時

場所：イスタンブール市 IMP

出席：Dr. H. Murat Celik, Head, Transportation Group, Istanbul Metropolitan Planning & Urban Design Center (IMP)

Mr. Ihsan Hadi Karadeniz, Transportation Department

小山総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ “Istanbul Metropolitan Planning and Urban Design Center (IMP)” は2005年7月に設立され、現在350人が働いている。今後、500人程度まで増員される予定である。
- ・ JICA 調査のカウンターパート機関は Department of Transportation of Metropolitan Municipality of Istanbul である。しかし、JICA 調査団が使用する事務所は IMP に設置する予定である（2006年5月に新たな場所に移転する予定—現在の建物は以前の展示会場）。
- ・ Department of Transportation は交通マスタープランを重視しており、そのためのモデル作成も重視している。様々な条件の変化を将来計画に反映させるためにはモデルが不可欠である。これまで各種のモデルを検討してきており、GIS とのインターアクションに優れている TransCAD が良いと考えている。
- ・ マスタープラン作成の Phase 1 は2007年初めまでの予定で予算 US\$ 3 million を計画している。Phase 1 では3つのチーム編成を考えており、チーム A はハイウェイ・ネットワーク・モデルを担当し、2006年1月までに完成する予定である。チーム B は GIS を担当する。チーム C は 15,000 household を対象にパイロット家庭インタビュー調査を実施する予定である。
- ・ 学者によれば、家庭インタビュー調査の抽出率は4%が望ましいということであるが、必要資金と信頼性の観点から最大 2.5%あれば充分と考えている。本格的な家庭インタビュー調査は2006年2-6月に予定しており人口ベースで20万人、家庭ベースで6-7万家庭を想定している。
- ・ Phase 1 に続いて Phase 2 を予定しているが、Phase 2 は JICA との協力で1年半程度を考えている（2008年前半に終了予定）。イスタンブール市にとって JICA が Phase 2 に対しどう協力できるかが極めて重要である。
- ・ イスタンブール市の交通マスタープランは1985年（マルマライ鉄道が中心）、1987年、1997年（市と TUI の協力）の3回にわたり作成されてきた。これらマスタープランは作成されたが、ほとんど実施されなかったという大きな問題を抱えている。今回のマスタープランはイスタンブール市の交通問題を改善するため必ず実施されなければならない。
- ・ 今回のマスタープランは次の3つのコンポーネントからなる：
 - ・ (1) 「公共交通サービスの改善」で、鉄道・バス・フェリーなど異なる公共交通サービスの Inter-modal transit を対象とする。公共交通サービスは相互に競合するのではなく協力することが必要である。
 - ・ (2) 「交通インフラの整備」を目的とし、フライオーバー、大規模インターチェンジ、駐車施設、旅客ターミナルなどを含む。収益性・社会的影響などを考慮した F/S、実施方法、資金調達（BOT などの PPP も含む）などについての検討が必要。
 - ・ (3) 「交通マネジメントとコントロール」で短期的な施策を含む、また、エンジニアリングの面からの検討も必要になる。

- ・ (4) 上記(1)-(3)全体の” Action & Coordination Plan” が必要であり、短期・中期・長期の時期別プランが必要である。また、イスタンブールは地形的に厳しい条件下にあり、Geographical Analysis も重視することが必要である。
- ・ 対象地域は Greater Metropolitan Istanbul の全域で、ゾーン数は 400 以上（以前は 200 程度）とし、TransCAD を使って上記(1)-(3)のマスタープラン造りを進めたい。
- ・ イスタンブール市の都市交通計画には UNDP/UNEP が興味をもっており 7つのコンポーネントからなる提案をしてきた。また、ボスフォラス大学からは” Congestion Management Project” に関する提案書が提出されている。

- ・ Mr. Karadeniz:
- ・ イスタンブール市の交通問題は、土地利用、交通インフラ、制度などそれぞれの問題点は何なのか、問題構造の全体的な把握が必要である。
- ・ 次に、問題改善のために何が必要かを検討すべきである。自動車交通をどうするか、公共交通をどうするか。インフラは何が必要か、F/S の結果はどうか。公共交通をいかに改善するか。これらに関する東京の経験は非常に貴重であり、日本側の考え方を聴きたいと考えている。
- ・ イスタンブール市の人口は 10-13 million で、地方からの流入人口により毎日人口が増加している。これを収用するために交通をどうしたら良いか。
- ・ 毎日 600 台の自動車が追加されるなど、自動車への依存はますます高まっている一方で、鉄道ネットワークは非常に限られている。このような状況下で自動車依存を減らすことはできるのか。イスタンブールでは地形条件から鉄道の導入は難しく、LRT など別の軌道系交通機関によって対応することが必要だろう。地下鉄は地下 35 メートルの深度で建設されている。
- ・ 日本では民間鉄道会社による土地開発が行われてきたようだが、その実施には政府のサポートが必要だろう。日本の民間鉄道会社が行っている鉄道駅の商業化、バス事業による集客力の強化などを学び適用していきたい。
- ・ Phase 2 では、解決を図るべきトピックスを立てて公共交通の改善に取組みたい。公共交通のインフラとサービスの” Readjustment/ Reintegration” など。
- ・ UNDP/UNEP の提案は Ministry of Environment & Forestry の関係からのものであり、何時開始するのかよく分からない。

以上

ボスポラス大学

日時：2005年11月15日（火） 15時-16時

場所：ボスポラス大学

出席：Prof. Dr. Gokmen Ergun, Dept of Civil Engineering

小山総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ これまでの経験からすると、既存の交通容量を最大限に活用し、その後に Capacity Development を検討することが望ましい。交通容量をいくら増加しても自動車交通の増加には追いつけない。
- ・ 1974-75 年のイスタンブール都市交通計画はセンサスから得られるトリップデータを利用して作成された。その後、マスタープランが何回か作成されたが、いずれも実施されていない。これはマスタープランをしっかりとフォローする仕組みがなかったためである。シカゴの”Chicago Area Transportation Study (CATS)”はこの点でイスタンブールとは全く異なっていた。マスタープランを実施するためには、マスタープランの実施に向けた組織を設立しフルタイムで働くスタッフが必要である。Istanbul Metropolitan Planning Center は非常に良いアイデアであり、順調に動き出している。
- ・ 都市交通における日本の経験は重要であり、JICA はイスタンブール都市交通計画で重要な役割を果たせると思う。特に、シナリオの作成段階で日本を含む世界のアイデアを集めることが必要であり、カプタン教授と協力の仕方を検討したら良いだろう。
- ・ “Congestion Management Project “は既存システムを効果的・効率的に活用することを目的とするものであり、交通信号による交通流の最適化、アクセス・コントロール、線形改良、ITS などを含むもので、多額の投資を必要とするものではない。
- ・ 当プロジェクトはハルク教授と3ヶ月間の協力を予定してプロポーズしたものである。TransCAD を使って Incremental Traffic Assignment を行い、Velocity/Capital Ratio が1に近い、あるいは1以上のリンクを推定し、そのいくつかについて混雑緩和の検討を行う予定である。混雑緩和では渋滞を減らすという点以上に走行時間の信頼性を高めることが重要である。3ヶ月の協力期間内に何をアウトプットとするか、エリア・ライセンシング、TDM、パーク&ライド、バス専用レーンなど検討中である。
- ・ 以前に、旧市街で バスレーン（中央にバスレーン・市電レーン、外側に自動車）を導入したことがあったが、自動車側からの反対で中止に追い込まれた。バスレーンでは 800 buses/day、20,000-30,000 passengers/day の輸送が可能である。

以上

イスタンブール市 IMP

日時：2005年11月16日（水） 13時-15時30分

場所：イスタンブール市 IMP

出席：Dr. H. Murat Celik, Head, Transportation Group, Istanbul Metropolitan Planning & Urban Design Center (IMP)

小山総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ JICA 調査の Project Coordinator & Manager は Prof. Murat Cilik が担当する。IMP はイスタンブール市のマスタープランを早期に作成し実現するために設立された。JICA 調査のステアリング・コミティのチェアマンは運輸局長ボズドアンが担当。同コミティの機能については運輸局長と協議して頂きたい。
- ・ Integrated Transport Master Plan では、次の3つのコンポーネントを含むことが必要である：①Public Transport (鉄道、バス、フェリー)、②Transport Infrastructure (Network Improvement, network investment, infrastructure related inter-modal cooperation - transfer centers, parking facilities, ride & park facilities)、③Traffic management & control。パブリック・トランスポートにもインフラは重要である。
- ・ M/M には JICA の EIA の簡単な説明を載せる。
- ・ JICA の協力は協力範囲を限定せず、拡大する方向で考えて頂きたい。道路はクラス分けに関らず全ての道路がミュニシパリティの管轄下になり、道路についても計画課題は多い。ただし、Trans European Motorway は KGM の管轄下であるが、オペレーションとメンテナンスはミュニシパリティが実施している。第3ボスフォラス関係は KGM の管轄である。
- ・ ミュニシパリティは民間企業と合弁会社を設立できることになり、不動産会社と合弁で公共交通機関の乗り換えセンターを整備する予定である。
- ・ イスタンブール市長選挙は2007年末の予定である。
- ・ イスタンブール市役所の職員になるためには特別のテストを受けなければならない。IMP の専門家などのリクルートにはこのテストが障害になるため、「ビムタシュ」と呼ばれる民間企業を設立し、これに人材派遣を依頼するという形態をとっている。IMP の多くのスタッフがビムタシュからの派遣者である。

以上

UNDP イスタンブール事務所

日時：2005年11月16日（水） 16時30分-17時30分

場所：UNDP イスタンブール事務所

出席：Mr. Hansin Dogan, Program Manager

小山総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ UNDP は” Business Project” との関連で、Public Private Partnership (PPP)に関係している。
- ・ General Environment Facility (GEF)の規模は4年間でUS\$ 3 billionであり、世銀・UNEP/UNDPで運営管理している。世銀は主にインフラ関係で関与している。GEFの主な対象は、生物多様性、気象変動、水資源、持続可能な交通（Clean & renewable fuel, more importance on public transport）である。GEFはグラントであり、小規模案件は50万ドル以下、中規模案件は100万ドル以下、大規模案件は100万ドル超であり、イスタンブール市の” Sustainable Transport Project”にはUS\$10-15 millionを計画している。GEFの運用実績についてはweb siteに詳しい。
- ・ UNEPと協力して環境関係のファンドを活用している。イスタンブール市とは今年4月からエネルギー関係、特に、公共交通機関による天然ガスの利用に関し協議を始めている。当件の担当者はアンカラにいる。
- ・ イスタンブール案件はUNDPのRegional Officeに提出され検討されている。Regional Officeの審査後はGEF Councilの審査を受けることになる（採択の決定には最短でも6ヶ月必要）。
- ・ Middle East Technical Universityとの協力で” Industry Zone Management Project”を実施しており、その一環としてメトロを考えている。
- ・ 最近、イスタンブール市長は” Re-Profiling” と呼ばれる急激な改革を実施し、City Councilを設立し多数の職員を解雇した。詳細については” Corporate Governance Association of Turkey” www.tkyd.org に詳しい。

以上

イスタンブール市 IMP

日時 : 2005 年 11 月 17 日 (木) 14 時-15 時 30 分

場所 : イスタンブール市 IMP

出席 : Dr. Rafet Bozdogan, Head of Transportation Department, IMM

Mr. Ihsan Hadi Karadeniz, Transportation Department

Dr. H. Murat Celik, Head, Transportation Group, Istanbul Metropolitan Planning & Urban Design Center (IMP)

小山総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要 : 以下のとおり。

- イスタンブール都市交通計画は、①プロジェクト・スケジュール策定、②マスタープラン計画策定、③マスタープラン実施という 3 つのプロセスを踏むことになる。第 2 段階のマスタープラン作りでは次の 3 つのコンポーネントを含まなければならない :
 - Public Transportation: Rail, Rubber tire, sea の整備とインテグレーション
 - Infrastructure: junction, parking, etc.
 - Traffic Management & Control (for effective use of existing roads, traffic rules for people to follow): roads, bridges, car park, railways
- JICA の現 S/W & M/M には(1)と(3)が入っているが、(2)が抜けている。(2)も含まれなければマスタープランとは言えない。ぜひ追加して頂きたい。
- Phase 1 の交通関連調査とモデルのキャリブレーションはイスタンブール側で実施するが、Phase 2 に含まれる 3 つのコンポーネントの短期・中期・長期の施策については JICA 調査の中に全てを含めて頂きたい :

	Short-term	Mid-term	Long-term
Phase 1 Preliminary Survey (2005-2007)			
Phase 2 Master Planning			
(1) Public Transportation	→		
(2) Infrastructure	→		
(3) Traffic Management	→		

- JICA が調査のスコープを狭めたいというカウンター・オファーがあったのであれば、イスタンブール市からの要請書を受け取った段階で直ちにイスタンブール市にその旨連絡すべきだった。そうすれば、イスタンブール市は、①他のドナーに協力を求めスケジュール通りに計画作りを進める、②JICA の要望を入れて外れた部分の対応を考える、などの対応策が採れた筈である。今の段階でスコープを狭めたいと言われても遅すぎる。→確かに「そうだ」
- マスタープランの実施については、ODA に期待する方向と、自己資金を活用する方向とがある。
- コンポーネント(2) Infrastructure Development では、将来の交通需要予測が重要になるが、2025 年を目標とする土地利用計画は今後 2 年以内に作成する予定である。先ず、10 万分の 1 で作成し、その後、1/25,000、1/5,000 を作成する予定である。交通需要予測には 1/25,000 を利用する予定。
- イスタンブール市は日本の正式な回答を SPO から受け取っていないため、M/M & S/W に署名することはできない。しかし、マスタープランに含めるべき 3 つの要素を含め、短期・中期・長期の施策を調査対象とすることに同意するのであれば、署名に応じて結構だ。
- イスタンブールの自動車保有台数は 150 台/1,000 人という低いレベルにあり、毎日 650 台の自動

車が新たに道路に加わっている。今後短期間に 250 台/1,000 人程度になることが予想され、道路インフラの増加は不可欠である。いかにして道路容量を増加させるかが問題である。それ以上の自動車に対して道路整備の必要性があるか否かは今後の検討課題である。

- 道路の両側は駐車でいっぱいになっており、道路容量を著しく減少させている。しかし、これらの自動車をどこに駐車させたら良いかが問題である。
- 現在の公共交通を拡充し、今後 10 年間に、レール系 350-400km (現在は約 120km)、バス 8,000-10,000 台、船舶 2,000 隻程度に増強することが必要と考えている。
- 現在は 200 万台の乗用車があるが、10 年後には 400 万台に増加するだろう。自動車交通を削減するためには、100 万台が利用されず住宅の駐車場に止まることが必要だろう。
- 当ミーティングでの協議をベースに第 2 次ドラフト M/M & S/W を作成して頂き、明日夕刻 6 時に PMI で最終確認を行いたい。運輸局長はスケジュールが詰まっているため申し訳ないが出席できないので、チリキ教授と協議して頂きたい。

以上

イスタンブール市 IMP

日時：2005年11月18日（金） 18時-19時00分

場所：イスタンブール市 IMP

出席：Dr. H. Murat Celik, Head, Transportation Group, Istanbul Metropolitan Planning & Urban Design Center (IMP)

小山総括 梅永福総括 兵藤アドバイザー 室岡 JICA 社会開発部職員

概要：以下のとおり。

- ・ 提出いただいた第2次ドラフト M/M & S/W は17日の運輸局長との協議を適切に踏まえており、十分に満足できる内容である。先ず、小山リーダーに署名してもらい、それを21日（月）に運輸局長に廻し、署名するという段取りにしたい。
- ・ JICA 事前調査団は都市交通に関する高い専門性を有しており、高いレベルのプロフェッショナルであることが確認でき、非常に嬉しい。
- ・ 自分はイズミール大学から1年間の予定で PMI に派遣されているが、大学に籍は残してある。2年目以降は週に何回かの講義をしなければならないだろうからイスタンブールに常駐することはできなくなるだろう。当案件のプロジェクト・マネジャーを続ける予定であるが、JICA はレベルの高いプロフェッショナルであることが確認できたので、2年目からは週2日程度イスタンブールに来れば良いのではないかという感触を得た。JICA と接触できて非常にうれしい。

以上

Metropolitan Municipality of Istanbul - BİMTAŞ
Istanbul Transportation Master Plan (2005)

Annexe: 1

Household Survey

Residential Information

A.1. District Code
A.2. Regional Code
A.3. Street Code
A.4. Residence Code

A. 5. District Name
A. 6. Street Name
A. 7. House/Building No.
A. 8. Apartment No.
A. 9. Telephone No
A. 10. Type of Residence

Apartment	Detached	
-----------	----------	--

Household Information

B.1. No. of Persons	B. 2. Name	B. 3. Age	B. 4. Sex	B. 5. Level of Education*	B. 6.	B. 7. If Student, Code*	B. 8. Driving Licence	B. 9. Blue Card	B. 10. Free Pass
					B. 6. B. 6.				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Level of Edu./Student Codes :	Compulsory Edu.: 1, Senior High School: 2, College: 3, Master : 4, PhD: 5.
Professional Status Codes :	Not Working: 0; Full Time: 1; Part Time: 2; Multiple Professions : 3; Retired: 4; Student: 5
Driving Licence :	Yes: 1, No: 0
Blue Card :	Yes: 1, No: 0
Free Pass :	Yes: 1, No: 0

B. 11. Number of private automobiles belonging to the household

B. 12. Number of other automobiles (company car etc.) used by the household

B. 13. Number of other motor vehicles belonging to the household

B. 14. Parking area of automobiles used by the household at evening times
(Street: 1; own garage: 2; open parking lot: 3; closed/multistorey parking lot: 4) Monthly cost TL

B. 15. Do you own your house? Yes No

If not,

B. 16. Amount of rent if yes,

B. 17. What would be the amount of rent, if you rent your house?

B. 18. Do you have another house? Yes No

B. 19. What is the total monthly income of your family?

1. 0- 500 TL	<input style="width: 30px;" type="text"/>
2. 501-1000 TL	<input style="width: 30px;" type="text"/>
3. 1001-1500 TL	<input style="width: 30px;" type="text"/>
4. 1501 - 2500 TL	<input style="width: 30px;" type="text"/>
5. 2501 - 3500 TL	<input style="width: 30px;" type="text"/>
6. more than 3501 TL	<input style="width: 30px;" type="text"/>

B. 20. View of the interviewee as to the 3rd Bosphorus Bridge
(against: 1; favorable: 2; favorable, if rail and rubber tyre transit are combined: 3; favorable only for rail transit bridge: 4; tube tunnel: 5)

Survey Information

Survey Number

Interviewer Number

Date

Hour

Period of Survey

1st Section min.

2nd Section min.

Preparatory Study for Development Study

Date Feb 20, 2006

1. Title of the Cooperation Project and Name of the Project Proponent

1-1. Title of the Cooperation Project

The Study on Integrated Urban Transportation Master Plan for the Istanbul Metropolitan Area in the Republic of Turkey

1-2. Name of the Project Proponent

Istanbul Metropolitan Municipality (IMM)

2. Outline of the Project and the Location (Population, Race, Economics, Education, Land use, the Environment, Other socioeconomic situation)

2-1. Location

The study area shall cover the whole area of the Istanbul Metropolitan area, with the area of 5,343 km² in total.

2-2. Project Description

The study will make a proposal on the improvement of the urban transportation in the Istanbul City with the following objectives:

- (1) To improve and expand inter-modal public transit system in view of reducing car dependence;
- (2) To increase road capacity in view of accommodating vehicle traffic in a short run as well as guiding proper urban expansion in a long run; and
- (3) To strengthen traffic management and control in view of more efficient use of existing road capacity.

2-3. Outline of the Istanbul City

(1) Population: 1.2 million

(2) Race: Turkish, Kurd, Armenian, etc

(3) Economics: Istanbul is the center of the country's economy, taking its advantageous location at an international junction of Asia and Europe, and land and sea trade routes. Istanbul makes about 36% of the total exports and 40% of the total imports of Turkey. Istanbul is the leading force in the Turkish economy, generating 22% of Gross Domestic Product (GDP). The annual GDP growth between 1990 and 2003 is 3.1%, 3.8% in the manufacturing sector, 3.3% in service, 3.0% in industry, and 1.0% in agriculture.

Education:

- Literacy rate above age 15 in 2003: 88.3 %

- Gross enrollment ratio (Primary, Secondary, and Tertiary level in 2002/3): 94 %, 76 %, 25 %

(4) Land use: The southern part of the city is generally flat and densely populated area, while the northern part of the city is mountainous forest area with reservoir for the people of the Istanbul City.

(5) Other environmental situation: Istanbul is highly populated and is encountering serious air

pollution due to increasing car ride and congestion. The northern part of Istanbul, where has forest area and reservoir for the people of Istanbul, is threatened by rapid urbanization and development.

3. Legal Framework of Environmental and Social Considerations (Law, Competent Agency, Projects subject to EIA, Procedures, Information Disclosure and Stakeholders participation)

3-1. Law: Regulations on Environmental Impact Assessment (2003)

3-2. Competent Agency: Ministry of Environment and Forest (MEF)

3-3. Project subject to EIA

Table1 Project subject to the EIA system

Project Type	
Chemistry, petrochemicals, pharmaceuticals and wastes	Tourism, sports house and training facilities
Metallurgy and machine/textile manufacture	Mining
Agriculture, forest and food	Clinker grinding facilities
Transportation, infrastructure and shore structure	Coal process facilities
Energy	

3-4. Procedures

The Regulations on Environmental Impact Assessment (number 25318) sets forth the administrative and technical methods and principles to be abided by during the Environmental Impact Assessment process. The owner of project shall apply to the Ministry with a file prepared based on the project introduction format. The Ministry shall examine the information and documentation in the file of application for conformity. Those files, which may be found improper in respect of preparation shall be returned to the owners in order to be completed. Such developers shall submit their files again to the Ministry after they have completed any lacks.

In case that the Ministry decides that a file is prepared properly, then the Ministry shall, considering the information in the application file, found a committee consisting of the authorized persons from the Ministry and the developer and/or his/her/its representatives. The Ministry shall request the developer to reproduce the application file as many as the number of the members of the committee. The procedures set forth in this paragraph shall be completed within three working days. For the projects, that are decided that “Environmental Impact Assessment is required”, the developer shall apply to the Ministry with such a decision and the project introduction file, attached to the application. Action shall be taken on such a file as an application file. The Ministry shall examine such a file and request the developer to reproduce the file as many as the number of the members of the committee, as determined by the Ministry.

The Ministry shall forward a copy of the application file to the members of the Committee, attached to a letter showing the date and place of the Public Participation Meeting and Scope Determination Meeting and inviting the committee to the first meeting. The representative of the Ministry shall preside the committee and secretarial services shall be carried out by the Ministry.

The Ministry may, if they find it necessary, invite representative from universities, institutes, research and expert organizations, professional chambers, trade unions, unions, non - government

organizations as members as well, considering the subject and type of the project and the properties of the site selected for the project.

It is essential for the members representing their institutions and organizations to have sufficient knowledge and experience and to be authorized to submit opinions on behalf of the institutions and organizations which they represent.

4. Categorization and its Reason

Categorization: B

This study contains some physical components likely to raise environmental and social adverse impacts such as. In particular, there are potential adverse impacts on social aspects including involuntary resettlement, deterioration of historical and cultural heritage/residential area.

5. Provisional Scoping (Adverse Impacts and Envisioned Mitigation Measures, Alternatives)

5-1. Adverse Impacts

Table2 Result of provisional scoping

Environmental Items		Rating	Description
1	Involuntary resettlement	B	Depending on proposed transport project, involuntary resettlement may arise.
2	Local economy	C	Unknown (Positive impact on local economy is expected because of the decrease of traffic congestion.)
3	Water usage	C	Unknown.
4	Land use	C	Unknown (The study aims at promoting transport-oriented land use, which may contribute to avoiding further sprawl.)
5	Social institution	C	Unknown.
6	Existing social infrastructure and services	C	Unknown.
7	The poor, indigenous of ethnic people	B	Possible adverse impacts on the squatters in the transport project site.
8	Misdistribution of benefit and damage	C	Unknown (Accessibility of the poor may be improved.)
9	Local conflict of interests	C	Unknown.
10	Children's right	C	Unknown.
11	Cultural heritage	B	The historical heritage/buildings are likely to be affected depending on the proposed project.
12	Infectious diseases	C	Unknown.
13	Accidents (risks)	C	Unknown. (Reduction of accidents is expected due to better network allocation of traffic and control.)
14	Air pollution	C	Unknown. (Reduction of air pollution is expected due to the shift

			of trips from private cars to public transport.)
15	Water pollution	C	Unknown.
16	Soil contamination	C	Unknown.
17	Waste	B	Emission of construction debris, waste soil, general waste, etc. from various activities.
18	Noise and vibration	B	Deterioration of noise/vibration level during the implementation of transport projects.
19	Ground subsidence	B	Ground subsidence by lowered groundwater level associated with metro construction activities.
20	Soil erosion	B	Erosion of topsoil after land leveling.
21	Offensive odors	C	Unknown
22	Geographical features	B	Alteration of valuable geography by drilling, filling, etc.
23	Bottom sediment	C	Unknown
24	Flora, fauna and biodiversity	C	Unknown
25	Global warming	C	Possible increase in gas emission by human activities especially on vehicles, etc.

Rating

A: Expected serious impact

B: Expected somewhat impact

C: Not clear (when becoming clear as it is necessary to inquire and investigation progresses, it should fully take into consideration)

5-2. Mitigation Measures

Table3 Envisioned Mitigation Measures

Environmental Items		Rating	Envisioned Mitigation Measures	Items to be confirmed
1	Water usage	B	Good coordination with the land use plan (avoid transport plan near/in water reservoir areas)	Present condition of water supplies
2	Air pollution	B	Encouragement of public transportation usage & discourage private car ride	Present condition of air pollution
3	Water pollution	B	Good coordination with the land use plan (avoid transport plan near/in water reservoir areas)	Present condition of water pollution
4	Soil contamination	B	Implementation of preventive measures during construction activities	Present condition of soil contamination
5	Waste	B	Implementation of preventive measures during construction activities	Actual condition of waste disposal
6	Noise and	B	No construction activities during the	Continuous noise/vibration

	vibration		night time	monitoring before, and during the construction
7	Offensive odors	B	Discouragement of private car ride & implementation of preventive measures during construction activities	Present condition of odors
8	Geographical features	B	Good coordination with the land use plan	Present condition of geographical features
9	Bottom sediment	B	Planning of a proper sewer and a drainage treatment plan	Present condition of bottom sediment
10	Accidents (risk)	B	- Traffic safety measures - Earthquake	- Present condition of accidents - Record
11	Global warming	B	Encouragement of public transportation usage & discourage private car ride	Meteorological data

5-3. Alternatives

The study includes various components and may come up with various plans, ranging from infrastructure development plans to such policy measures as traffic demand management plans. The study will therefore investigate alternative plans in the early stage of the study.



**PROJECT Development Facility
Request for Pipeline Entry Approval**

AGENCY'S PROJECT ID: PIMS 3636
GEFSEC PROJECT ID:
COUNTRY: Turkey
PROJECT TITLE: Sustainable Mobility in Istanbul
GEF AGENCY: UNDP/UNEP
OTHER EXECUTING AGENCY(IES): Municipality of Istanbul
DURATION: 12 months
GEF FOCAL AREA: Climate Change
GEF OPERATIONAL PROGRAM: OP 11: Sustainable Transport
GEF STRATEGIC PRIORITY: CC-6: Modal Shifts in Urban Transport and Clean Vehicle/Fuel Technologies
ESTIMATED STARTING DATE: January 2006
ESTIMATED WP ENTRY DATE: FEBRUARY 2007
PIPELINE ENTRY DATE:

FINANCING PLAN (US\$)	
GEF ALLOCATION	
Project (<i>estimated</i>)	8,000,000
Project Co-financing (<i>estimated</i>)	25,000,000
PDF A*	
PDF B**	350,000
PDF C	
<u>Sub-Total GEF PDF</u>	350,000
GEF Agency	
National Contribution	350,000
Others	350,000
<i>Sub-Total PDF</i>	700,000
<i>Co-financing:</i>	
<i>Total PDF Project Financing:</i>	1,050,000

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

Dr. Hasan Z. Sarikaya

Date: *(Month, day, year)*

Undersecretary of Environment and Forestry

GEF Focal Point/MoEF

Ministry of Environment and Forestry,

Bakanlikar, Ataturk Bulvari, Ankara – Turkey

Tel: +90312 425 1285

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for approval.

Yannick Glemarec
Deputy Executive Coordinator

Geordie Colville
Project Contact Person

Date: (Month, Day, Year)

Tel. and e-mail: +421 259 337 408
geordie.colville@undp.org

Name & Signature

Ahmed Djoghlaif

Assistant Executive Director

UNEP/DGEF

Tel: +254-20-624166

Fax: +254-20-624041 / 624042



Lew Fulton

Project Contact Person

Tel: +254-20-623257

E-mail: lew.fulton@unep.org

Date: October 14, 2005

TABLE OF CONTENTS

<i>COVER PAGE</i>	7
PART I – PROJECT CONCEPT	10
A – SUMMARY	10
B – COUNTRY OWNERSHIP	11
B.1. COUNTRY ELIGIBILITY	11
B.2. COUNTRY DRIVENNESS	11
C – PROGRAM AND POLICY CONFORMITY	13
C.1 PROGRAM DESIGNATION AND CONFORMITY	13
C.2 PROJECT DESIGN	13
C.3 SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY).....	27
C.4 REPLICABILITY	28
C.5 STAKEHOLDER INVOLVEMENT/INTENDED BENEFICIARIES	28
C.6 MONITORING AND EVALUATION (MISSING).....	32
D – FINANCING	32
D.1 FINANCING PLAN	32
D.2 CO-FINANCING.....	32
E – INSTITUTIONAL COORDINATION AND SUPPORT	32
E.1 CORE COMMITMENTS AND LINKAGES	32
E.2 CONSULTATION, COORDINATION AND COLLABORATION BETWEEN AND AMONG IMPLEMENTING AGENCIES / EXECUTING.....	34
E.3 IMPLEMENTATION/EXECUTION ARRANGEMENTS	34
PART II – PROJECT DEVELOPMENT PREPARATION	34
A – DESCRIPTION OF PROPOSED PDFB ACTIVITIES	34
A.1 COMPONENT 1: INTEGRATION OF LAND USE PLANNING, URBAN TRANSPORT PLANNING AND ENVIRONMENTAL MANAGEMENT	35
A.2 COMPONENT 2: IMPROVING INTEGRATION AND EFFICIENCY OF PUBLIC TRANSPORT 35	35
A.3 COMPONENT 3: BUS RAPID TRANSIT PILOT DEMONSTRATION	35
A.4 COMPONENT 4: TRAFFIC DEMAND MANAGEMENT	36
A.5 COMPONENT 5: IMPROVING DECISION-MAKING PROCESS IN TRANSPORTATION AND PUBLIC AWARENESS CAMPAIGN	36
A.6 COMPONENT 6: STRATEGIC ENVIRONMENTAL ASSESSMENT	36
A.7 COMPONENT 7: CLEAN FUELS	37
B – PDF BLOCK B (OR C) OUTPUTS	37
C – JUSTIFICATION	37
D – TIMETABLE	37
E – BUDGET	37
PART III – RESPONSE TO REVIEWS	38

A – SUMMARY

Turkey is a highly urbanized country with over 75% of its population living in urban areas. Rural-urban migration continues to be strong, mostly because of perceived employment opportunities in the urban areas. Turkey's largest urban agglomeration is Istanbul, with an estimated population of 11 million. Since 1960, the city has experienced dramatic population growth at an average rate of 4.3% annually, although the average annual population growth rate has declined to 3.2% over the last decade. Other important cities are Ankara, Izmir, and Adana, with populations of approximately 4 million, 3 million and 2 million respectively. Among the main problems facing Istanbul and other large and medium-size cities are: (i) inadequate management of the public transport system; (ii) deficient land-management policies which lead to unregulated urban growth; (iii) environmental degradation, particularly air pollution, leading to health related problems (iv) and unmet demand for basic urban services.

The relatively high levels of emissions and concentrations of airborne pollutants affect health and quality of life. PM10, NO₂, ozone and CO are the pollutants of most concern in Turkey's largest cities, as their concentrations still exceed the air quality standards at certain locations and during certain periods. Besides their direct effect on health and material damage, PM10, NO_x and SO_x are major precursors for the formation of PM2.5, which inflicts serious health impacts, including increased morbidity and mortality. Moreover, NO_x and VOCs are also precursors for ozone formation, which has in itself serious local social costs and damage, while contributing to global warming. Transportation is also a major source of GHGs, mostly in the form of CO₂. In Turkey, transport is a major source of energy-related GHG emissions, accounting for about 20 % of CO₂ emissions.

The overall objective of the project is to reduce greenhouse gases from ground transport in Istanbul through the promotion of a long-term modal shift to more efficient and less polluting forms of transport. The transport sector contributes to rising greenhouse gas (GHG) emissions in the form of CO₂, CH₄, N₂O and gases responsible for the formation of O₃, such as NO_x and the VOCs. As carbon dioxide emissions are directly linked to fossil-fuel use in transport, the proposed project will lead to a reduction in greenhouse gases as less energy-intensive and zero-emission modes of transport will be promoted. To that end, the project will support the ongoing Strategic Metropolitan Planning Study and the Istanbul Transportation Master Plan for 2020 being prepared by the Istanbul Municipality which present a vision that is consistent with the overall objectives of the GEF operational program on sustainable transport.

The proposed project will adopt a comprehensive, integrated approach to sustainable transport by focusing on the following seven components: 1) integrate land-use planning, urban transport planning and environmental management, 2) better integrate and improve the efficiency of the existing public transport system, 3) demonstrate the effectiveness of bus rapid transit 4) implement traffic demand management measures, 5) improve the transportation decision-making process through greater public awareness and participation, 6) incorporate strategic environmental assessments into the planning process and 7) promote clean fuels for public transit buses.

Major expected outputs of the project include a) improved institutional coordination between environment, transport and planning agencies at the national and metropolitan level, b) increased awareness among Turkish authorities and citizens of the need for, and viable approaches to, achieving sustainable transportation in Turkish cities, c) a reduction in the number of motorized trips and trips length in Istanbul, with incentives in place for 'chained' (multi-purpose) trips, d) a decrease in the use of private vehicles, especially during peak periods and in congested areas, e) a more efficient and integrated public transport system with improved accessibility and affordability for the poor, f) a more transparent and participatory transportation decision-making process and the introduction of innovative regulatory and economic instruments to limit and reduce Istanbul's local and global emissions, and g) enhanced analytical tools to assess the environmental costs and benefits of transport plans. Taken together, these outputs can be expected to slow the rate of growth of Istanbul's, and eventually other parts of Turkey's, transport-related CO₂ emissions. Our initial estimate is that the project will result in transport GHG emissions in Istanbul that are 10% lower than they would otherwise have been after full implementation of related activities. This will be further investigated and fully estimated during the pdfb phase of the project.

B – COUNTRY OWNERSHIP

B.1. COUNTRY ELIGIBILITY

Turkey is a party to the United Nations Framework Convention on Climate Change (UNFCCC) signed on the 24th of May, 2004.

B.2. COUNTRY DRIVENNESS

Turkey has made great progress over the last two decades in creating mechanisms to address its environmental problems: the 1982 Constitution recognizes the right of citizens to live in a healthy and balanced environment; an Environment Act was passed in 1983; the Ministry of Environment was created in 1991; public awareness and demand for a clean environment are growing; and active non- governmental environmental organizations are emerging. Despite these positive developments, environmental issues have not been adequately incorporated into economic and social decisions.

Turkey's Seventh Five Year Development Plan (1996 - 2000) recognized this inadequacy and called for development of a national environmental strategy. The Development Plan is the main instrument for coordinating government policies, including those for environmental management. The National Environmental Action Plan (NEAP) responds to the need for a strategy and can supplement the existing Development Plan with concrete actions for integrating environment and development. The NEAP can make four additional contributions to national policy by: (a) serving as an input to the Eighth Development Plan; (b) being used as a building block for Turkey's National Agenda 21; (c) acting as the basis for discussion at the next biannual meeting of the High Council for the Environment of the Ministry of Environment; and (d) helping to represent Turkey's environmental outlook at upcoming regional and international arena.

The NEAP has been prepared by two separate but linked processes: (i) thematic groupings of experts; and (ii) participatory conferences of stakeholders. The first process culminated in the generation, by 19 working groups with over 800 experts, of reports and recommendations about a range of sectoral and cross-cutting environmental problem areas. Outputs of the working groups are being published by the Government. The second process was a series of meetings that involved more than 100 stakeholders to set broad goals, develop criteria for prioritization and rank recommendations found in the reports of the thematic working groups. The processes were guided by an Executive Committee consisting of representatives from the State Planning Organization, the Ministry of Environment and the World Bank which financially contributed to the preparation of the NEAP. The goals of the NEAP identified by the preparation process are:

- better quality of life;
- increased environmental awareness;
- improved environmental management; and
- sustainable economic, social and cultural development.

These goals guided the working groups, stakeholder workshops and formulation of the action plan.

In addition, Turkey has been an active participant in the discussions on the provisions and regulations of UNFCCC. As part of these activities, the Government is currently preparing its first national communication under the GEF Enabling Activity for Climate Change with GEF support. The Government has likewise taken steps leading to the further development of institutional capacity through among other actions: a) the organization of an inter-institutional committee under the aegis of the Vice-president's office to ensure full coordination on climate change issues; and b) the establishment of a climate change office. The Government is also in the process of defining the main thrusts of a National Climate Change Plan that considers the following goals:

- Strengthen the capacity to adapt to the anticipated impacts from climate change;
- Promote reduction of emissions and increase the sequestration capacity for greenhouse gases;

- Minimize the adverse impacts on the nation's exports of fossil fuels;
- Promote scientific capacity and the availability of information on the impacts of climate change on the nation's economy and ecosystems;
- Support awareness and dissemination of information; and
- Promote financial mechanisms for the adoption and funding of response actions.

The Istanbul Municipality has started a Strategic Metropolitan Plan for 2020 together with the initial preparation phase for the revision of Istanbul Transportation Master Plan (ITMP) that was approved in 1997. The UNDP identified an important opportunity to design a GEF Air Quality and Transport project for Istanbul by taking advantage of the work carried out in parallel by the Municipality of Istanbul and the Ministry of Environment. This proposal seeks GEF grants to develop a project under Operational Program 11 that will further increase the potential local and global environmental benefits in Istanbul.

C – PROGRAM AND POLICY CONFORMITY

C.1 PROGRAM DESIGNATION AND CONFORMITY

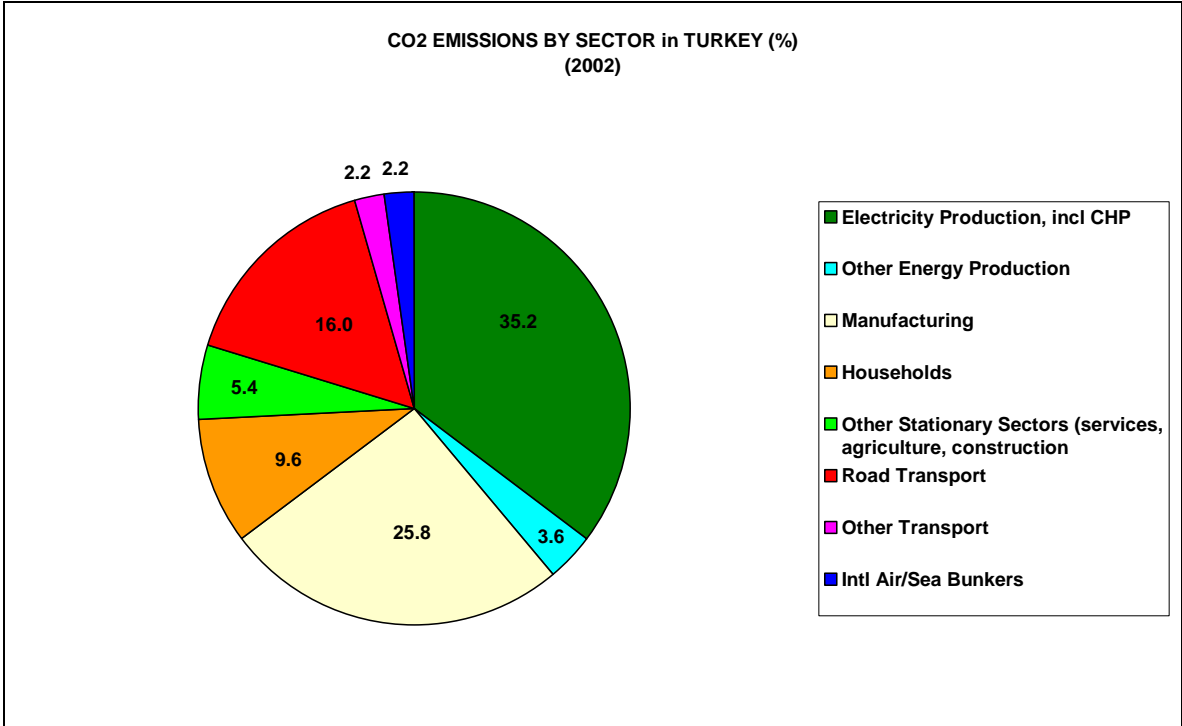
The proposed project is consistent with the GEF's Operational Policy on Sustainable Transport (OP11) and the GEF Strategic Priority on Modal Shifts in Urban Transport (CC-6). The project: a) is country-driven and supports the government's efforts to promote sustainable development; and b) demonstrates cost-effective methods in this case for improving urban air quality and reducing greenhouse gas emissions. The project aims at achieving a long-term modal shift to more efficient means of transport, aligning land-use and transport planning with the local and global environmental objectives of reducing air pollution and GHG emissions. To this end, the project would support studies and pilot intervention to (a) integrate urban land-use and transport planning; (b) conduct targeted research for environmental assessment (both local and global) of transport and land-use measures; (c) advance political dialogue engaging different actors dealing with transport, land-use, and environment matters at all levels of government; and to (d) facilitate dissemination programs for a better participation of stakeholders at all levels.

C.2 PROJECT DESIGN

C.2.1 *Problem Statement*

Turkey's annual energy-related CO₂ emissions stand at 211 million metric tons and are expected to double over the next 25 years. With GDP projected to grow at over 6% per year over the next 25 years, private automobile use and the pollution associated with it are expected to increase substantially. The transport sector already contributes 20% of Turkey's anthropogenic CO₂ emissions (see graph below). Over the period 2002-2004, Turkey's economy averaged 7.6% growth per year. As a result, the total vehicle stock (excluding motorcycles and tractors) has risen from around 1.4 million in 1983 to 3.9 million in 1994 and 7.8 million at the end of 2004.

With a population of 73 million, Turkey has the third largest population in Europe behind Russia and Germany. Istanbul, which has a population of over 10 million, qualifies as a megacity and has more inhabitants than 115 countries in the world. The population growth rate for the country as a whole is estimated at 1.4% per year but this rate is even higher in the Marmara region of Turkey, where Istanbul is located. It is notable that 50% of Turkey's residents are under the age of 25. This age structure would suggest that there is considerable population momentum and the potential for significant automobile demand growth.

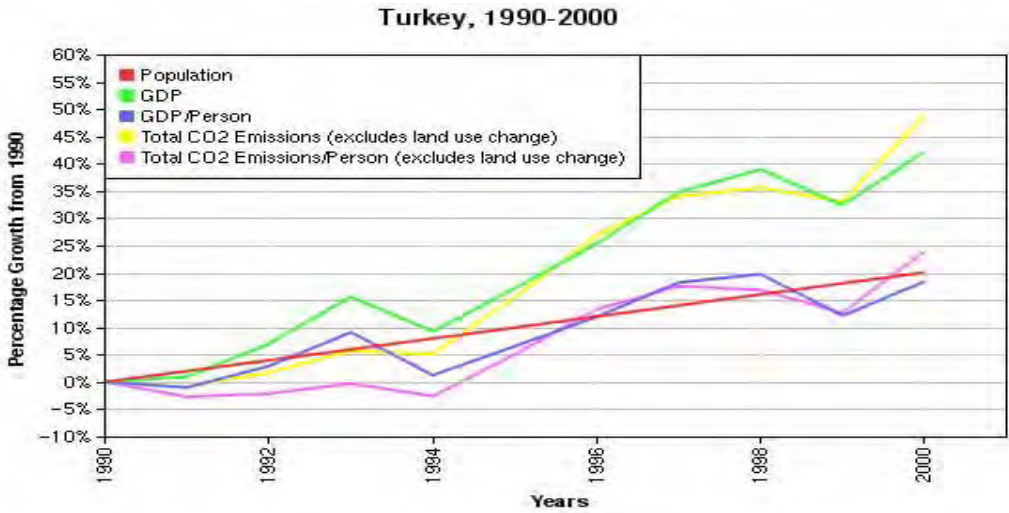


Source: International Energy Agency Sectoral Approach Data

Economic growth and urbanization have combined to exacerbate Turkey's urban transport problems, leading to a dramatic rise in private vehicles, a high degree of traffic density, smog and other air pollutants, and rapidly increasing CO₂ emissions. Like many other metropolitan areas in the world, traffic congestion is currently a major problem in Istanbul. Car ownership and car use have increased dramatically in the last decade. Motorization has increased eight times between 1980 and 2000, while the population has increased 112%. In the same period, total daily road vehicle-kilometres have increased by 53%, from 18 million to 27.6 million. Congestion affects all road-based modes of transport and the entire economy of the country. Increased emissions and direct exposure of citizens add to the urgent need to take drastic policy measures to reduce traffic jams in Istanbul without or with very little road development and reduced growth in car use.

There are currently 5.4 million passenger cars on Turkey's roads and the domestic demand for motor vehicles continues to grow unabated. A record 750,000 vehicles were sold in 2004,

including 450,000 cars, according to the Turkish Automotive Industry Association. The public transportation system in Istanbul has been unable to keep pace with the rapid growth and changing urban structure. Local authorities have been struggling under the pressure of urbanization without sufficient funds to accommodate growth. The proliferation of motor vehicles on city streets has led to serious socio-economic impacts. On a national level, Turkey's road accident rates are 3-6 times above those of the EU. About 7,000 people die each year in road accidents and the losses because of injuries and property damages are estimated to be in the order of 2% of GDP. Every two years the number of fatalities on the roads equals the death toll of the tragic Marmara earthquake in 1999¹. Turkey's strong economic expansion – GDP climbed 40% between 1990 and 2000 – has fueled the sharp increase in private consumption and the accompanying environmental consequences. Interestingly and as can be seen in the graph below, the growth in total CO₂ emissions has almost mirrored GDP growth.



Source: WRI Climate Analysis Indicators Tool

C.2.2 Baseline Scenario

The continuing growth in road traffic in Turkey is resulting in a range of economic, social and environmental costs, which are expected to increase in line with or at a faster rate than the projected increases in traffic, perhaps 3% per year in a baseline scenario. The public transportation systems in major cities have been unable to keep pace with the rapid growth and changing urban structure.

The government of Turkey has recognized this problem and has in recent years been increasingly interested in improving its cities' public transportation systems. The national government has also adopted a policy to improve the conditions of transport systems in all medium-size and large cities in Turkey. The Istanbul Metropolitan Municipality also has recognized the need for

¹ SweRoad (2001) Methods and Values for Appraisal of Traffic Safety Improvements. General Directorate of Highways, Turkey.

sustainable transport and has begun to prioritize public transport by investing in transit infrastructure, including development of an underground metro and surface tram systems. As a result, the central business district of Istanbul is served by a relatively good public transport system featuring buses, trams and the nascent metro system. This transit system is generally well managed and is continuously being improved.

However, given the recent rapid growth of the city outside the center, there is now a major shortage of transit service into many parts of the city and inner suburbs. This shortage would be difficult and very expensive to solve through expansion of the metro system, and an alternative approach is needed. A promising alternative is the expansion and improvement in bus services, featuring the introduction of bus rapid transit systems in high-travel corridors. The Municipality of Istanbul considers BRT a cost-effective transit option, but does not have the technical capability to develop such a system without external assistance. Therefore, no such transit initiative is foreseen in the baseline scenario.

There is also a strong need to better align land use development with transport development, and encourage densification around transport stations and hubs. Finally, there is a need to introduce supporting policies, that assist with transport demand management and slowing the rate of growth in car travel, and to introduce clean vehicles and fuels into the public transport sector. No such initiatives are foreseen in the baseline scenario.

Therefore under the baseline scenario, there is little change in the unsustainable trends we see occurring today. In the absence of a comprehensive, integrated approach to sustainable transport, Istanbul's streets will likely remain traffic-choked and CO₂ emissions will continue to climb unabated.

C.2.3 Alternate Scenario

The proposed project consists of a number of distinct but linked components. The different components focus on integrating environmental considerations in transport projects in Istanbul, aligning land-use and transport planning, and implementing transport demand management measures, with objectives of reducing global emissions, improving efficiencies and creating incentives for non-motorized and public transport. The project will also help analyze and develop a number of innovative regulatory and economic instruments to accomplish some of the above mentioned objectives.

The Municipality of Istanbul has an ambitious long-term plan for the expansion of rail transit system (metro and LRT) to serve the needs of the entire metropolitan area. Because the implementation of this plan would require considerable financial sources, more cost-effective, appropriate transit options should be considered for some transit corridors that are not suitable for an underground metro. The obvious low-cost, high capacity option to consider is bus rapid transit (BRT). Since the cost of such systems are 1/10 or less per kilometer than the cost of

building metro systems, 10 or more traffic corridors could be equipped with a BRT line for the cost of one metro line. It is imperative for Istanbul to explore this option and use it where metro lines clearly do not make sense. BRT can provide an efficient component of a sustainable transport system, in harmony with other components such as metro, LRT and ferries, used where justified.

Many inefficiencies in the current transport system in Istanbul are due to the lack of coordination among several state and municipal agencies and their strategies. The impacts of urban planning on transport and vice-versa are often not fully recognized, and environmental impacts are not paid proper attention. The regulatory instruments currently in use have helped reduce air pollution from different sources, but are not always the most cost-effective way to prevent and reduce air pollution. The proposed project will include vital improvements in coordination among different agencies, better integrate land use and urban transport planning (in particular introducing densification near transport system “nodes”), evaluating and introducing supporting transport demand management measures, and increasing the awareness and understanding of sustainable transport among stakeholders and the general population. Recent successes in Latin America and elsewhere show that achieving a modal shift can be more cost effective and can yield GHG emission reductions in a much shorter time frame than other approaches.

A preliminary analysis has shown that a considerable amount of GHG emission reductions could be achieved between 2000 and 2010, through the implementation of the transport policy measures in this project and the projects that were proposed in the Istanbul Transportation Master Plan (ITMP) for 2010. Based on the modal shift estimated in the ITMP, total daily GHG emissions from road traffic in the city are projected to grow by at least 25% less over the decade, with a result of 10% lower emissions in 2010 in the alternative scenario than in the baseline scenario. A more detailed investigation and estimation of this reduction will be made during the pdfb phase of the project.

To achieve these outcomes, the project will include the following seven components:

C.2.3.1 Component 1: Integration of Land Use Planning, Urban Transport Planning and Environmental Management

Background

Istanbul retained its seashore city characteristics until the end of the 1960s and then began to spread out in all directions. Increase in the use of automobiles and buses created new demands for the construction of roads. In 1973, the first Bosphorus Bridge and in 1988, the second Bosphorus Bridge and its connecting beltways were opened. Before the first bridge was opened, only 24 % of the population lived on the Asian side. At present, the Asian side of the city accommodates 35 % of the population and 26 % of the employment. The Istanbul Municipality started a comprehensive strategic metropolitan planning studying in 2005. Actions are required

to reduce the need to travel through local provision of services and facilities, and through the greater priority allocated to public transport. Sustainable living for most people would be in settlements that are of a sufficient size so that the full range of facilities can be provided within walking, cycling or public transport distance (< 5km). These settlements would be at a medium density, have mixed land-uses and high level of accessibility to the public transport network. It also means that these areas have to provide a high-quality environment within which people wish to live. Most services and facilities can be provided locally².

Objectives

This component aims at combining land use incentives with transportation and environmental policies, thus reducing trip lengths, improving traffic flows, and promoting a modal shift to more efficient transport methods. The focus of this component will be to design the guidelines of a strong planning system, integrating land use and transport planning at the metropolitan and regional levels that will direct development to achieve high-density, mixed-use and accessible centers. The planning system should be seeking to ensure proximity between where people live and the services, jobs and facilities they wish to gain access to. One of the main reasons for the environmental and public transportation problems faced presently by Turkish cities has been the lack of coordination between the planning, environmental and transportation agencies, when defining the cities' development goals. This has led to disconnections between urban centers (historic and other key areas) and main transportation nodes. Another objective of this component will be to recover important urban centers for their cultural, social, educational or economic importance through a combination of land use, public transport and environmental incentives, densification and adoption of zoning and land-use regulations. Physical integration of NMT and public transport will be given priority, as well as incentives for the use of bikes at the district level. About 35 % of daily trips in Istanbul are made by foot. Most of these trips are to school. In 1997, total trip rate was estimated at 1.54 trips per capita per day of which 0.54 was walking trips. Because of the topographic conditions, inconvenient road infrastructure, and cycling dangers, cycling is currently negligible in the city although the GEF project will seek to change that. This component could assist Istanbul in following the lead of other European cities by mandating major employers to locate new facilities near transit stops and to approve new housing and commercial developments only after close scrutiny of their impact on traffic congestion.

Proposed Activities

- Design guidelines of a strong planning system, integrating land use and transport planning at the metropolitan and regional levels that will direct development to achieve high-density, mixed-use and accessible centers.
- **Prepare proposals for the redevelopment of abandoned or degraded areas in city center, articulating the real estate development to existing or planned transport corridors, and**

² Banister, D (2000), *Sustainable urban development and transport-a Eurovision for 2020*, *Transport Reviews*, 20, 1, pp.113-130.

complementing the intervention with other transport modes, so that travel needs are reduced and mix land-uses developed: residential, commercial and services.

- Help prepare a strategy to create incentives for private sector involvement in the projects.
- Organize workshops including the citizens commercial establishment owners, real estate developers, to present and discuss the municipal plans in both areas and prepare an action plan for additional investments integrating urban development, land use and transport plans, with special focus on public transport and non-motorized transport.
- Implement a new policy, with linkages to other project components (such as the BRT pilot project, Component 3)

Institutional Arrangements

The Istanbul Municipality will execute this component in coordination with Ministry of Transportation, the Ministry of Environment and the Project Team.

C.2.3.2 Component 2: Improving Integration and Efficiency of Public Transport

Background

As described above, Istanbul is served by a relatively good public transport system, which is generally well managed and continuously being improved. About 60 percent of the total 11 million daily motorized trips in Istanbul are made by public transport. Buses and minibuses carry more than half of daily passengers and the total share of rail and sea transport is only 8 %. In Istanbul, low income residents depend highly on the public transportation system for their mobility. Most of these people live in the low-income neighbourhoods of the cities. The poor spend around 13% of household income on public transportation. Despite this, urban infrastructure has been used inefficiently, as it has traditionally favored the use of private cars which mobilize only 20 percent of the people traveling within the city. Increased car travel has a great impact on congestion and GHG emissions in urban areas. A more efficient public transport system and modal integration can improve the overall efficiency of the system. CO₂ emission reductions will be attained as a result of the modal shift to public transportation and the reversal of the trend of increased car use.

Objectives

The main objective of this component is to maximize the use of existing public transportation in Istanbul, by improving transit service, safety and efficiency, facilitating modal exchange, and increasing public awareness of available services and improvements. This component will cover issues such as improving inter-modal transfers and integration between buses, trams, metro, LRT, ferries and minibus feeder systems; station and corridor improvements such as better NMT (cycle and pedestrian) access and safety; and information/outreach activities such as better signage, schedule presentations, etc.

A set of system performance indicators will be developed to define the current situation and to

evaluate the effectiveness of the interventions defined in this project. Special attention will be given to improving mobility of the urban poor by increasing their access to efficient and clean public transport systems. Finally, road safety will be promoted as a key element for enhancing the public transport service for existing and new users.

Proposed activities

- Develop a set of system performance indicators;
- Assist in carrying out and assess the results of the study of the main interchange stations proposed by the Municipality of Istanbul;
- Asses the existing plans, with institutional and legal framework, that aim at fare integration and joint management of the public transport system in the metropolitan region.
- Identify and design investments for improving stations and corridors, especially with improved NMT access.

Institutional Arrangements

The Istanbul Municipality will take the lead in coordinating the studies and preparing the terms of reference in collaboration with the Project Team.

C.2.3.3 Component 3. Bus Rapid Transit Pilot Demonstration

Background

Around Istanbul and other cities in Turkey public transport is being improved, but there remains a major gap between standard bus services and the very expensive, very high capacity rail systems that have been installed in a few places. The bus rapid transit (BRT) option appears promising in many situations and corridors of metropolitan areas. Experiences in other cities and countries, particularly in Latin America, have shown the benefits of rapid bus corridors and the use of low emission buses. The academic community in Turkey has been presenting the BRT system as a viable mass transit alternative: easy to implement in a short period of time, requiring a much smaller investment per kilometer than an underground or overhead metro, planned and operated much like a rail-based system, the 'Metrobus' is a welcome solution to cities with limited resources³. Quick implementation of BRT systems, providing clean, high quality transport into the city, could help discourage urbanites and suburbanites from becoming car-dependent for their commutes and serve as a model for integrating transport and land use planning.

Objectives

The objective of this component is to build a BRT system in Istanbul which will demonstrate the effectiveness and low cost of the bus rapid transit (BRT) system as an alternative public transport system in Istanbul and a viable alternative to high cost rail systems for other cities in Turkey and the region. It will seek to design and implement an optimized BRT pilot system in

up to three corridors. A planning stage will identify the corridors suitable for BRT and include special attention to inter-modal transfers and integration with the existing metro and tram system and with potential bus feeder systems. To save time and money during the implementation phase, the planning stage will also include the design and implementation of a detailed project management plan to minimize the risk associated with the project. It will also include a densification strategy around stations and adoption of related zoning and land-use regulations, cycle and pedestrian infrastructure to ensure access to stations and increase non-motorized travel within the corridors, and landscaping features to increase the attractiveness of the corridors and incentives for walking and biking. Options and incentives for the use of modern, low-emission buses along the corridors will be studied as well, as part of the GHG reduction strategy. (See Component 7.)

Proposed activities

- Develop and implement the project management plan for the BRT from design through to launch;
- Conduct an assessment of potential BRT corridors and select a number of priority corridor options for one or more pilot BRT corridor developments;
- Conduct the full design and engineering study for the selected corridors, along with management and investment plans integrating physical (priority lanes, landscaping, integration with non-motorised transport –NMT-) and operational aspects (tariffs, schedule, management, revenue distribution, etc.) of the BRT;
- Conduct stakeholder outreach activities and ensure broad understanding of, and support for, pilot BRT plans;
- Establish monitoring mechanisms for assessment and evaluation of introduced systems and technologies;
- Evaluate options to remove older and more polluting bus fleet through operating contracts and regulations.

Note: Monitoring and evaluation will be carried through an implementation phase of the pilot, though the investment funding and construction phase will be carried out by the city with non-GEF funding

Institutional Arrangements

The IETT (Istanbul Municipality Bus Operations) will take the lead in cooperation with the Municipality of Istanbul and local environmental, urban planning and transport authorities. EMBARQ, will lead the framing and structuring of the project development plan for the IETT.

C.2.3.4 Component 4. Traffic Demand Management (TDM)

Background

TDM arises from the understanding that traditional supply-oriented approaches to

transportation needs are insufficient; new roads tend to simply create more traffic, new parking lots bring ever more cars. TDM tries to view transportation issues as part of a broader network of planning choices, emphasizing not only the physical network of our streets and highways, but also the activities which necessitate travel, and the organizational frameworks within which these choices are made. Like many other metropolitan areas in the world, traffic congestion is currently a major problem in Istanbul. 24% of the total motor vehicles (2.3 million motor vehicles) and 31% of the total private cars (about 150 cars per 1000 inhabitants) in Turkey are registered in Istanbul. Almost 3.6 million private vehicle trips are made every day in Istanbul.

Car ownership and car use have increased dramatically in the last decade. Motorization has increased eight times between 1980 and 2000, while the population has increased 112%. In the same period, total daily road vehicle-kilometres have increased by 53%, from 18 million to 27.6 million. Urban transportation has long been formed by a road-based policy focusing on providing more road capacity to accommodate the rapidly increasing number of motor vehicles in Istanbul. As a result, multi-lane roadways, over and underpasses, complex intersections etc. have been built to solve the ever increasing congestion problem. However, additional capacity provided by these road investments facilitated a rapid growth in car use and created “induced traffic” as a result of the changes in the land-use and activity patterns.

Traffic control measures such as road pricing, parking pricing and management, car use restrictions, high-occupancy vehicle (HOV)-only lanes, traffic calming and other measures provide significant potential to reduce congestion by lowering the number of vehicle-km travelled through internalizing external costs. CO₂ emission reductions will be achieved through less congestion, and from the switch from cars to more efficient travel modes, like public and non-motorized transport and car-pooling. Motor vehicle traffic is now considered as the major source of air pollution in Istanbul. Total emissions from road traffic in the city have increased approximately 50% in the last decade. Automobiles are the main polluters in road traffic. Private car traffic is the source of about 80% of daily CO₂, 90% of CO, 50% of NO_x and 70% of SO₂ emissions from motor vehicles in Istanbul.

Since environmental impacts such as GHGs increase with rising motor vehicle use, traffic demand management would have a positive impact on reducing local and GHG emissions from transport. Congestion pricing could help reduce these traffic volumes and associated costs and also generate sources of funding for more efficient transport modes. For instance, motorized vehicle traffic decreased 20% in the first few months after the introduction of congestion pricing scheme in London. Many other European cities have applied traffic calming measures with great success, restricting car use in central areas without affecting their commercial viability. The project will provide and improve access to the transport system, attract business investments, while improving local pedestrian and bicycle facilities and integrating them with metropolitan transport corridors.

Objectives

This component aims at reducing and rationalizing the use of private vehicles in Istanbul, and more specifically in the city center. Traffic demand measures to be explored include congestion pricing, improved parking policies, measures to encourage car-pooling such as park-and-ride facilities, improvement in traffic flows (from traffic light synchronization) and physical segregation of modes. Focusing on the areas of cities that have already or will implement rapid mass transit systems, the project will make use of traffic demand management measures. Measures such as selective street closures, parking controls, pedestrianization schemes, traffic-cell circulation patterns or congestion pricing could help reduce traffic volumes and associated costs. Pilot investments will be made in some areas, while in others the focus will be on developing information and proposing future investments

Proposed Activities

- Assessments, workshops, and other outreach will be undertaken as required to help establish the viability of congestion pricing and other TCM approaches in Istanbul;
- **Establish cross-support to learn from European cities that have successfully applied central-area traffic calming schemes (such as London, Singapore);**
- Develop a general TDM strategy for the city, with analysis of its likely impacts on traffic levels and congestion, and evaluation of the policies after implementation;
- Develop a pilot phase strategy, including design work and implementation plan, and prepare the bidding documents for the different contracts related to the final design and implementation of selected measures;
- **Develop a set of access and congestion indicators and monitoring plan to establish the current (baseline) situation and to monitor the progress brought about by the interventions adopted by the city.**

Institutional Arrangements

The Istanbul Municipality in collaboration with the Project Team will take the lead in this component. Other agencies that will be involved are the Ministry of Transportation, the Ministry of the Environment and local environmental, urban planning and transport authorities, and NGOs.

C.2.3.5 Component 5: Improving Decision-Making Process in Transportation and Public Awareness Campaign

Background

In Turkey, the current regulatory framework has failed to improve the quality of service and has not contained the cost of service provision. There are concerns that the policy responses have been driven more by narrow sectional interests than wider interests of society. There is weak institutional capacity at the national and municipal levels to formulate and coordinate policies aimed at improving transport planning and traffic management. In some cases, there is a duplication of functions and responsibilities among several authorities. Several ministries and agencies are responsible for transport infrastructure matters and there is a great need for improved co-ordination.

The Ministry of Transport plays a key role in the road transport sector. However, responsibilities in relation to the implementation of road transport and traffic legislation are scattered over more than 10 other Ministries and authorities. In a comprehensive study coordinated by the Istanbul Municipality in 2002, 17 local and national authorities were identified to be partially responsible for the planning, investment, operation and management of transportation in Istanbul. This makes proper planning and coordination of activities extremely difficult. Mechanisms for establishing more effective coordination among the Ministries and streamlined decision making should be developed. In order to address regulatory problems in transportation, a new legislative proposal has been prepared to set up one local authority in Istanbul for the coordination of public transport.

On the other hand, increasing public awareness on safety and on environmental impacts of transportation together with the enforcement of EU legislation have put pressure on the decision makers to recognize the rights and obligations of transport users in Turkey. However, there is an urgent need that policy and decision making in transportation must become more open. Promotion of public awareness and fostering a sense of individual and collective responsibility through education and campaigns, and thereby encouraging changes in behaviour are of vital importance in promoting better understanding of the aim of sustainable transportation.

Objectives

This component aims at rationalizing the decision making environment in transportation at metropolitan level. It will address the issues such as problems in actual decision making environment in urban transportation; bottom-up versus to top-down decision making, involvement of stake holders (national and local institutions, citizens, NGOs, etc.) and promotion of public awareness and fostering a sense of individual and collective responsibility through education and campaigns.

This component also aims at enhancing environmental information and awareness: (i) management of environmental data for improving analysis, decision- making and public awareness; and (ii) environmental education and training that would be conducted through both formal and non - formal channels. (iii) better job of informing people of mass transit options. Better environmental information and a better educated public could help address the problem areas identified in the decision making process by broadening government and public perception about the risks and costs of a degraded environment, helping government to focus resources more efficiently on priority problems, and increasing public pressure on the political system to tackle sustainable transport issues.

Proposed Activities

- Assess the current legislative and institutional framework in the transportation decision making process;

- Recommend and implement specific changes in institutional practices and relationships to improve transport-related decision-making and policy implementation;
- Develop and carry out a plan for a national-level outreach program, to promote the replication of the work in Istanbul and other major cities in the country;
- Design and conduct an outreach and information dissemination campaign aimed at promoting sustainable transport among the citizens of Istanbul and members of the media;
- Organize workshops and public information campaigns to promote public awareness and to foster a sense of individual and collective responsibility in Istanbul;
- Create incentives for the creation of neighbourhood user associations so that they can voice their concerns and opinions about transport issues.

Institutional Arrangements

The Istanbul Municipality will take the lead in the development of the transport-related decision making process. The Project Team will work with other NGOs, citizen groups, the media and public opinion makers in the development of a campaign to promote sustainable urban transport. The campaign will initially focus on İstanbul then be expanded to the national level.

C.2.3.6 Component 6: Strategic Environmental Assessment (SEA)

Background

Strategic environmental assessment (SEA) is one of the main analytical tools and processes to achieve sustainable development results. SEA evaluates the potential environmental impacts in the early stages of policies, plans, and programmes. SEA also plays a significant role in enhancing the integration of environmental concerns in policy and planning processes and facilitates the design of environmentally sustainable practices. Current tools for policy making rely on the use of transport models inter-phased with an emission model assessing emission levels due to changes in direct transport measures (e.g. integrated land use and transport planning, bus rapid transit routes, traffic demand management, introduction of cleaner vehicles or fuels).

Objectives

This component would help develop a tool to combine environmental evaluation of all aspects of transport planning, linking transport to urban planning, air quality and climate change. As a result, it is expected that transport and land-use plans will incorporate an environmental dimension early on, or can be adapted to do so. The SEA will help provide information about the possible local and global links and consequences of planned policies, plans and interventions. The SEA process for transport in Istanbul will also assist in detecting and preventing unnecessary environmental complications and delays in the implementation process and consider environmentally friendly alternatives that may no longer be feasible at the project level, helping prevent expensive mitigation measures. Ultimately the process will help raise environmental awareness in the transport sector.

Proposed Activities

- Develop of a set of indicators to be used in the SEA;
- Integrate SEA process in decisions on urban transport and land-use planning processes;
- Conduct institutional strengthening to ensure public participation at a wider scale.

Institutional Arrangements

The Istanbul Municipality with the Ministry of Environment and the Ministry of Transportation will manage the process of introducing the assessment at the local level and mainstream environment considerations. EMBARQ will lead a group of stakeholders in the development of a set of indicators which will be used in the SEA.

C.2.3.7 Component 7: Clean fuels and clean power train technologies

Background

There have already been positive developments in reducing emissions caused by transportation in Istanbul. During the last decade, expansion of the rail transit network and the increase in the number of vehicles using unleaded gasoline equipped with catalytic converters have decreased the emissions from road vehicles. However, the rapid increase in car ownership and the longer travel lengths have outpaced the positive impacts of these improvements and GHG emissions are increasing.

As a signatory to the UNFCCC and an EU accession country, Turkey must reduce its GHG emissions. With 16% of the population and a 20% of the total motor vehicles in Turkey, Istanbul needs to develop a strategy for decreasing GHG emissions, especially those from public and private mass transit fleets.

Developing a strategy requires that we establish the baseline form which to evaluate the effectiveness of the interventions. The Municipality of Istanbul currently monitors ambient air quality through permanent and mobile monitoring stations located throughout the city. However, there is very little quantitative data related to transport emissions in Istanbul. Furthermore, existing air quality models are based on surrogate data from US and EU sources.

EMBARQ is in discussions with key multi-national corporations in the automotive and petroleum sectors, exploring opportunities for engaging the private sector in this project. We are looking for both technical and financial support from these companies. Ford Motor Company has already committed in-kind support and discussions centered on additional project partnership opportunities are on-going.

Objectives: Reduce GHG emissions and air pollution through the adoption of technically and economically viable alternatives to be used in the replacement/retrofit of the older, more polluting fleets in Istanbul; and the purchase of new vehicles. Implement pilot projects where appropriate. Promote private sector participation and alternative models of public-private

partnerships for the financing and management of urban transport projects. Create a GHG monitoring program; use the transport baseline and policy analysis tool to monitor the co-evolution of transport activity with local and GHG emissions.

Proposed Activities

- Conduct a mobile source emissions inventory, which will include marine emissions;
- **Conduct an in-depth study of available clean fuels and clean vehicle technologies, including a cost effectiveness analysis;**
- Develop a policy analysis tool for Istanbul that combines traffic activity simulations, representing the traffic conditions and driving cycles of Istanbul, with emissions simulation reflecting local fuel type and quality. The tool will analyze local and GHG emissions impacts of both transport and traffic strategies (BRT, better traffic flow, road pricing etc) as well as changes in fuel quality, fuel type and engine technologies;
- Develop the strategy for replacing the most polluting fleets and new vehicle purchases.

Institutional Arrangements

The Directorate for Environmental Protection for the Municipality of Istanbul, in partnership with EMBARQ, will lead the mobile source emissions inventory. EMBARQ will conduct the study of clean fuels and clean technologies with support from the private sector and the various mass transit agencies, both public and private, in the city. The Municipality of Istanbul will develop the strategy for vehicle purchase, retrofit and replacement.

C.3 SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

The Municipality of Istanbul has demonstrated a strong willingness to tackle the issue of sustainable transport and mitigate vehicular traffic. The Mayor of Istanbul signed the UITP's Charter on Sustainable Development in September 2005. This political commitment will be a key factor in ensuring the project's sustainability. In fact, two-thirds of Istanbul's cumulative municipal investments have been allocated to the transport sector, most of which have been earmarked for investments in mass transit infrastructure. Through its support for this GEF project, the city has made clear its commitment to follow along the sustainable strategies developed and initiated herein. It is also expected that the project will leverage additional resources from the private sector, which will also help to ensure that there is adequate funding for continued efforts in this area. Several project components such as integrating land-use and transport planning, improved modal integration, BRT demonstration and traffic demand management will eventually bring in higher revenues through higher ridership and congestion charges, which in turn could be reinvested into the public transit system.

Similarly, from a social and environmental perspective, the project will endeavour to improve the sustainability of urban transport in Istanbul by encouraging a shift to less polluting and less carbon intensive modes of transport and by promoting greater public awareness and participation in the decision-making process. Particular attention will be paid to enhancing the

accessibility and mobility of the urban poor to efficient and clean public transport systems through improved land-use planning and better NMT facilities. Decreasing car dependency and improving public transport in Istanbul will bring about substantial health, economic, social and environmental benefits that, for the reasons mentioned above, can be sustained well into the future.

C.4 REPLICABILITY

The replicability potential of the project is significant, and practically inherent to its objectives. Once the viability of the project components are demonstrated through pilot activities, the same regulatory, technical and economical mechanisms can be developed not only in the region but also other cities worldwide. This project will help design and conduct an outreach and information dissemination campaign aimed at promoting sustainable transport among the citizens of other major cities of Turkey such as Ankara, İzmir, Bursa, Adana, Gaziantep and Eskişehir. This campaign will include workshops, information campaigns and other relevant dissemination efforts. The project will also build on work conducted in other GEF projects, such as the BRT planning guide being developed in the UNEP Tanzania/Colombia BRT project, and will update this guide with special reference to Turkish cities.

C.5 STAKEHOLDER INVOLVEMENT/INTENDED BENEFICIARIES

Representatives from key National and Regional environmental agencies, land-use planning, and transport authorities and other government agencies will be invited to participate in the early project preparation discussions. A workshop to identify priorities for a potential Air Quality and Transport Project will take place in Istanbul in 2006 and will be co-hosted by the Istanbul Municipality, the Ministry of Transportation, and the Ministry of Environment. Participants will include local and national transport authorities, environmental agencies, representatives from the Metropolitan administrative areas, and from the planning Secretariats of various cities and metropolitan regions. In addition, representatives from the Academia, consultants, and NGOs will participate at the workshop. The involvement of both local and national representatives will be critical given the various components envisioned for the project and the potential central role that the national government may have in assigning beneficiaries of funds. Private sector participation is also central to the success of the project, and will involve representation from different sectors. Scientific institutions and academia, NGOs, and civil society will also continue to be involved early in the process and invited to participate in project preparation activities.

The project preparation will rely on the use of state-of-the-art techniques and tools for developing plans, programs, and policies involving transport and land-use planning. The ongoing process for land use, transport and planning in Turkish cities will also assist in detecting and preventing unnecessary environmental complications and delays in the implementation process and in considering environmentally friendly alternatives that may no longer be feasible at the

project level, helping prevent expensive mitigation measures. Ultimately the process will help raise environmental awareness in the transport and land-use planning sectors. It will also seek to assess the feasibility and benefits of integrating different municipal land use planning, transport and environmental agencies into single regional agencies, avoiding competing plans within metropolitan areas and helping mobilize political support for technically sound measures.

C.5.1 Project Management and Organisation's Tasks and Responsibilities

Project management and coordination arrangements and responsibilities of organizations and bodies concerned are described below.

Beneficiary contribution

The beneficiary for this project is the Municipality of Istanbul (MI). The Ministry of Transport (MoT) and the Ministry of Environment and Forestry (MoE) will provide technical support, on a need basis, to the MI for the overall project activities.

The MI will be responsible for:

- Appointing a Senior Programme Officer in charge of the technical implementation of the Project;
- Chairing and coordinating the Steering Committee;
- Organizing, coordinating and where necessary hosting all project meetings with assistance from the Project Management Team;
- Executing secondment of adequate staff from the MI and other major governmental institutions for undertaking project activities. The staff seconded should have good English skills;
- Sign letters of invitation for events such as the Steering Committee meetings, workshops and seminars;
- Solicitation of the technical inputs to the project activities;
- Providing timely response to the UNDP's requests for clarification of Steering Committee decisions, for selection and review of project staffing, work plans, progress reports, amendments to the project etc.

Implementing Agencies

The project will be implemented and co-managed jointly by UNDP and UNEP. The agencies will play equal roles in the overall project management, and each agency will take the lead on implementing different project components. UNDP will provide its strong expertise in development issues, and in particular the global leadership for the WSSD as well as its recent experience with the WSSD follow up process in Turkey, and its strong presence in Turkey through its country office. UNEP will provide strong technical expertise in many of the aspects covered in the project (such as BRT and fuels issues), and its strong analysis/evaluation/dissemination skills. UNDP Turkey will be responsible for direct technical and financial management of the project in close collaboration and consultation with the MI.

The two implementing agencies will each take a lead role in implementing different components in the project. UNDP will have primary responsibility for Components 1, 4, 5 and 6; UNEP will have primary responsibility for Components 2, 3, and 7. However, for all components the agencies will work together to ensure that there is the needed coordination and integration to ensure a successful overall project.

UNDP and UNEP will conduct transparent and competitive recruitment of all project paid staff. They will seek the clearance of the MI and the MoT for all staff inputs. They will appoint a responsible project officer (who is not paid from the project) who will co-manage the project on behalf of the two agencies. Project components will be implemented through the Project Management Team established through project funds. In addition to the results and the activities enumerated above, the two agencies will ensure:

- Professional and timely implementation of the activities and delivery of the reports and other outputs identified in this Description of the Action;
- Coordination and supervision of the activities undertaken in the project components with a view to incorporation of the requirements of the Five-Year National Development Plans, Accession Partnership, National Programme, WSSD follow-up process, MDGs, NHDRs, and the Local Agenda 21 process;
- Contracting of and contract administration for qualified local and international experts who meet the formal requirements of the UN;
- To coordinate with UN Country Team in Turkey with a view to mainstreaming in their interventions at the country level and funding as appropriate;
- Establishing an effective networking between project stakeholders, specialized international organizations and the donor community;
- Donor coordination for additional and project follow-up activities.

The UNDP and UNEP will be members of the Steering Committee and will work together with the Project Management Team.

Steering Committee

A Local Project Appraisal Committee (LPAC) will be established at the inception phase, which will be transformed to the inter-ministerial Steering Committee (SC) of the project, to maximise the co-ordination among the all related institutions and smooth implementation of the Project. The SC should include but not is limited to the government organizations, namely Municipality of Istanbul, Ministry of Transport, Ministry of Foreign Affairs, Ministry of Environment and Forestry and the Ministry of the Interior. Official members of the Steering Committee will also include the United Nations Development Programme, United Nations Environmental Programme and EMBARQ. The LPAC will recommend inclusion of other governmental, private sector, and civil society organisations as permanent members of the Committee or their participation in the work of the Committee on an ad hoc basis.

The SC will provide overall guidance for the project throughout its implementation period. The members will champion the mainstreaming of sustainable development into the working of their own ministries, agencies etc. In particular, the role of the SC will be to:

- Review the project work plan and make recommendations for its relevance to national policy and for its more effective mainstreaming into sectoral planning;
- Monitor the effectiveness of project implementation;
- Ensure networking among the country-wide stakeholders;
- Review and make recommendations for reports produced under the project ;
- Establish and endorse the thematic areas, eligibility and selection criteria for the Grants components with a view to ensuring linkage to national policy goals, relevance, effectiveness and impartiality of the decision making process;
- Ensure continued political will is given to project objectives by engaging the ministers responsible for their own ministries / agencies etc. in the advocacy for sustainable development, MDGs and EU accession priorities that are relevant to these and in piloting activities that could produce tangible results.

Project Management Team

A project management team will be established to carry out the project components. This team will include representatives of the Municipality of Istanbul, the various government ministries, EMBARQ and other selected consultants and NGO representatives, TBD.

EMBARQ will provide important technical support for the project and in particular for Components 3 and 7, as indicated above. It is the World Resources Institute Center for Transport and the Environment, established in May 2002 with the support of the Shell Foundation to address the problems of urban mobility.

EMBARQ works with politically and financially empowered authorities at local and global levels to foster viable government-business-civil society partnerships and, within the framework of these partnerships, identify, test, evaluate, and implement reasonable and effective solutions to local transport problems within a three to five year time horizon. The projects include the expansion of activities to other cities within the country or region to leverage the capacity and learning created through the initial partnership. EMBARQ is currently engaged in 3 megacities: Mexico City since 2002; Shanghai, since 2003; and Istanbul since February, 2005. They have been working closely with the Directorate of Environmental Protection and the Directorate for Public Transport Operations for the Municipality of Istanbul. Components 3 and 7 of the GEF proposal are based directly on work that EMBARQ has done in Istanbul over the past six months.

EMBARQ will appoint a project director to lead its involvement in the project and provide the necessary staffing to meet its commitments in an effective and timely manner.

EMBARQ will be members of the Steering Committee and the Project Management Team.

EMBARQ will lead and/or co-lead:

- Task 3 (BRT development) and Task 7 (Clean fuels/vehicles development);

C.6 MONITORING AND EVALUATION

The Full-Scale project will include a monitoring and evaluation component that will not only track the implementation and progress of the components, but will also assess the actual GHG emissions reduction and associated pollution decrease (and, to the extent possible, the resulting mobility, social and economic impacts). The M&E for the project will be based on the project planning matrix, comprised on the success indicators and means of verification that will be developed in the logical framework analysis during the PDF-B phase of the project.

The Full-Scale project will build a specific model for Istanbul. M&E team shall be incorporated at the project's start to ensure quality data collection and accurate tracking of project impacts. The goal of the M&E activity will be to provide a comprehensive assessment of the project's effectiveness in terms of specific indicators: 1) operational efficiency 2) GHG savings and the corresponding pollution mitigation impact and 3) the programme's sustained impact in accelerating the adoption and implementation of similar sustainable transport programs around Turkey and the broader region.

D – FINANCING

D.1 FINANCING PLAN

The total cost of the project is estimated at USD 18 million, with a GEF contribution of USD 8 million, and a duration of 4 years. The preparation activities under PDF B (USD 350,000) will be completed within 12 months from approval of the grant so that a full scale GEF project proposal can be ready for submission to the GEF council by February 2007.

D.2 CO-FINANCING

Co-financing will be provided by the local and national government and the contributions from the private sector contributions will be explored throughout project preparation. Commitments for cofunding for the pdfb phase have been made by EMBARQ and the Ford Motor Company.

E – INSTITUTIONAL COORDINATION AND SUPPORT

E.1 CORE COMMITMENTS AND LINKAGES

UNDP

Based on UNDP's previous experiment in the environmental sector, notably through the National Programme on Environment and Development, it is now positioned to provide support

to the Turkish authorities in meeting the environmental requirements for EU Accession. UNDP will work in partnership with the government to support new initiatives to promote the integration of sustainable development principles into national and regional development planning in line with the 6th Environmental Action Plan of the EU. UNDP will also continue and increase its support to the National Sustainable Development Committee, as requested, for improved coordination of the elaboration of the National Implementation Plan for Sustainable Development, as well as the implementation of sustainable development principles at the community level.

UNDP's involvement to date in environmental governance and sustainable development has focused on improving the capacity of authorities to plan and implement integrated approaches to environmental and energy development. In this context UNDP has provided support to the Turkish government in its efforts for the integration of global environmental concerns and commitments into national and regional planning. Turkey's ambition to join the EU has reinforced the need to focus on the environmental agenda. Drawing from the experience of the new EU Accession countries in 2004, UNDP anticipates the need for action and support in the area of policy, legal regulatory and institutional reforms as well as major investments in the environmental field.

Through collaboration with GEC, UNDP will continue to support national efforts to sustain biodiversity and to promote energy efficiency and conservation. Through its support UNDP will work with governmental and NGO partners to increase their capacity for sustainable management of agriculture, fisheries, forests, and energy for a pro-poor approach to conservation. Notably, UNDP will support the National Climate Change Commission by strengthening national and local capacities to formulate and implement strategies to address climate related risks.

UNEP

This project will be designed within the framework provided by the UNEP GEF Action Plan on Complementarity for UNEP GEF project interventions. It will be aligned with the overall strategy for UNEP GEF project design making use of UNEP's comparative advantages and expertise. Taking into consideration UNEP's intervention principles, it will be aligned with:

- Development and demonstration of tools and methodologies for improving environmental management;
- Strengthening the enabling environment so that countries can more effectively implement measures consistent with the UNFCCC.

The project will also share information with, and to the extent warranted, link with existing UNEP transport programmes such as the Clean Fuels and Vehicles Partnership. It will also draw on other UNEP GEF projects, namely "Reducing GHG Emissions with Bus Rapid Transit" (Tanzania and Colombia MSP), and make use of the BRT planning guide from that project.

E.2. CONSULTATION, COORDINATION AND COLLABORATION BETWEEN AND AMONG IMPLEMENTING AGENCIES, EXECUTING

Agencies, and the GEF Secretariat, if appropriate.

The proposed project and the PDF-B activities will be executed by the Municipality of Istanbul, under the overall coordination of a Project Implementation Unit at the Municipality. Each agency in charge of implementing the project components will lead the inter-institutional coordination for said components, draft TOR or define Technical Specifications, select consultants or providers of goods and services, and will ultimately monitor implementation of contracts.

The GEF funds will be managed by the Municipality of Istanbul, while specific components and tasks will be managed by working groups headed by different government agencies and EMBARQ. Disbursements and contracts will originate at the Municipality of Istanbul, except for those funds to be disbursed to EMBARQ, according to the contracting and supervision process geared by the agencies in charge of implementing each of the project components. The coordination mechanisms and arrangements will be carefully outlined in a project Operation Manual, to ensure full ownership of the project by the Municipality of Istanbul.

E.3 IMPLEMENTATION/EXECUTION ARRANGEMENTS

The project will be jointly implemented by UNDP and UNEP, and will be executed by the Municipality of Istanbul in close coordination with the Ministry of Transportation, the Ministry of Environment. During project preparation, the capacity of the Municipality of Istanbul and other relevant government agencies will be assessed in order to ensure the best possible institutional arrangements for the project. EMBARQ will also be actively involved in carrying out the project, especially with regard to the project components on BRT pilot demonstration, strategic environmental assessment, and clean fuels and power-train technologies.

PART II – PROJECT DEVELOPMENT PREPARATION

A – DESCRIPTION OF PROPOSED PDFB ACTIVITIES

PDF-B resources in the amount of USD1,050,000 are expected for this project. USD350,000 will be requested from GEF to carry out the project preparation activities outlined below. Commitments have been secured for cash and in-kind co-financing contributions of USD350,000 from EMBARQ, the Shell Foundation and Ford Motor Company (both through EMBARQ). An in-kind contribution of USD350,000 will be made by the Municipality of Istanbul to complete the proposed activities:

A.1 COMPONENT 1: INTEGRATION OF LAND USE PLANNING, URBAN TRANSPORT PLANNING AND ENVIRONMENTAL MANAGEMENT

Proposed PDF-B funded Activities

- Design preliminary guidelines and a policy framework for better integrating land use and transport planning at the metropolitan and regional levels that will direct development to achieve high-density, mixed-use and accessible centers, in concert with high-capacity transport nodes and corridors;
- **Organize stakeholder meetings including the citizens commercial establishment owners, real estate developers, to present and discuss the municipal plans and prepare an action plan for additional investments integrating urban development, land use and transport plans, with special focus on public transport and non-motorized transport;**
- **Plan for full project activities and prepare relevant sections of project brief.**

A.2 COMPONENT 2: IMPROVING INTEGRATION AND EFFICIENCY OF PUBLIC TRANSPORT

Proposed PDF-B funded Activities

- Identify and assess all key issues, and develop indicative plans for, an upgraded, integrated public transport network, including assessing results of the study of the main interchange stations proposed by the Municipality of Istanbul;
- Create guidelines and performance indicators for developing an institutional and legal framework that will enable fare integration and joint management of the public transport system in the metropolitan region;
- Develop an implementation plan to be carried out during the full project phase;
- Prepare the relevant sections of the full size project brief.

A.3 COMPONENT 3: BUS RAPID TRANSIT PILOT DEMONSTRATION

Proposed PDF-B funded Activities

- Develop a long range plan for BRT development in Istanbul, including identifying and prioritizing potential corridors;
- Develop a pilot phase project plan, including needed steps (such as the development of the Decision Road Map and risk management strategy) and investments toward implementation during the full project phase;
- Organize one study tour to educate and mobilize political support for a better integration of the BRT;
- Organize meetings with stakeholders and NGOs to involve them in the process, including one workshop.
- Benchmarking of various system designs: data collection, etc;
- Develop Value Assurance Review plan with participation of international experts;
- Prepare the relevant sections of the full size project brief.

A.4 COMPONENT 4: TRAFFIC DEMAND MANAGEMENT

Proposed PDF-B funded Activities

- Assist government agencies in assessing options for and developing an integrated traffic demand management system in Istanbul, with focus on pricing mechanisms and complementary measures to restrict individual car use;
- Conduct a feasibility study for a congestion pricing scheme (traffic demand forecast, legal feasibility, choice of technology, allocation of proceeds, definition of the areas/axis to be priced, expected environmental benefits, etc);
- Conduct a study tour to Singapore and London and/or organize one workshop to exchange experiences on traffic demand management and road pricing, to provide input to the policy development process for Istanbul
- Prepare the relevant sections of the full size project brief.

A.5 COMPONENT 5: IMPROVING DECISION-MAKING PROCESS IN TRANSPORTATION AND PUBLIC AWARENESS CAMPAIGN

Proposed PDF-B funded Activities:

- Assess the current legislative and institutional framework in the transportation decision making process;
- Create a team of NGOs, citizen groups, the media and public opinion makers dedicated to the development of a campaign to promote sustainable urban transport;
- Design an outreach and information dissemination campaign aimed at promoting sustainable transport among the citizens of Istanbul;
- Organize one local workshop to get stakeholder involvement and input into developing the campaign;
- Develop a plan for a national-level outreach program, to promote the replication of the work in Istanbul and other major cities in the country;
- Prepare the relevant sections of the full size project brief.

A.6 COMPONENT 6: STRATEGIC ENVIRONMENTAL ASSESSMENT

Proposed PDF-B funded Activities

- Organize a workshop to fully introduce the concepts of SEA in the transport sector in Istanbul and prepare follow up activities like the selection of activities to be assessed, the impacts to be assessed, the reporting requirement and how to mainstream the SEA process into planning and decision making;
- Identify and design needed analysis and specific studies;
- Develop a set of indicators to be used in the SEA;
- Prepare the relevant sections of the full size project brief.

A.7 COMPONENT 7: CLEAN FUELS

Proposed PDF-B funded Activities:

- Design and conduct mobile source emissions inventory, including measuring baseline transport activity and both local and GHG emissions from transportation in Istanbul, and source apportionment;
- Conduct a study of clean fuel/engine technology combinations for reducing GHG emissions in the urban environment in a cost effective manner, and identify any promising options for implementation in full project phase;
- Work with the local and international private sector to develop one or more pilot projects focused on clean fuel, clean engine technologies to achieve GHG reductions;
- Prepare the relevant sections of the full size project brief.

B – PDF BLOCK B (OR C) OUTPUTS

Outputs of project preparation activities correspond to the tasks outlined in the previous sections, namely:

- Identification, initial planning and design work for major component initiatives and pilot interventions;
- Updated emissions inventories and transport baseline evaluation (Component 7);
- Establishment of various stakeholder groups and other outreach groups to participate in full-size project phase;
- Bibliography of major reviews and metadata sources of relevance to the assessment;
- Full size project proposal for submission to GEF Work Program.

C – JUSTIFICATION

PDF-B grant will be use to design the full assessment project and provide sufficient detail so that the analysis is conducted in the most cost-effective manner and maximize the benefits of the GEF project and ensure complementarities to existing policies and interventions. Many different stakeholders are involved in the this complex in nature, as it integrates various sectors and stakeholders, while complementing the implementation of the Istanbul Transportation Master Plan and Istanbul’s municipal transport and urban development strategies.

D – TIMETABLE

The PDF B will be implemented over a period of 12 months.

E – BUDGET

PDF-B Preliminary Budget by Component

Component		Financial Sources
-----------	--	-------------------

		Total	GEF	Municipality of Istanbul	EMBARQ, Shell Foundation and FORD (tentative: exact amounts and shares TBD) (In kind: USD)
		(USD)	(USD)	(In kind: USD)	(In kind: USD)
1.	Integration of Land Use Planning, Urban Transport Planning and Environmental Management	120,000	40,000	80,000	
2.	Improving Integration and Efficiency of Public Transport	110,000	40,000	70,000	
3.	Bus Rapid Transit Pilot Demonstration	195,000	55,000	40,000	100,000
4.	Traffic Demand Management	80,000	40,000	40,000	
5.	Improving Decision-Making Process in Transportation and Public Awareness Campaign	80,000	40,000	40,000	
6.	Strategic Environmental Assessment	80,000	40,000	40,000	
7.	Clean Fuels/Technology and Mobile Source Emissions Inventory	300,000	25,000	25,000	250,000
8.	Project Management	85,000	70,000	15,000	
	Total	1,050,000	350,000	350,000	350,000

Co-financing Sources				
Name of Co-financier (source)	Classification	Type	Amount (US\$)	Status
Municipality of Istanbul	Municipality	In kind	350,000	Pending
EMBARQ/Shell/Ford	Foundation/Private sector	Funds	350,000	Committed
Sub-Total Co-financing			700,000	

PART III – RESPONSE TO REVIEWS

A - Convention Secretariat

B - Other IAs and relevant ExAs



REPUBLIC OF TURKEY
MINISTRY OF TRANSPORTATION AND
COMMUNICATION
GENERAL DIRECTORATE OF RAILWAYS,
HARBOURS AND AIRPORTS
CONSTRUCTION

DLH



IMPROVEMENT OF
SURFACE METRO SYSTEMS
GEBZE - HAYDARPAŞA
SİRKECİ - HALKALI
AND CONSTRUCTION OF
BOSPHORUS RAILROAD
TUBE TUNNEL

PROJECT FUNDING

The Marmaray Project consists of two major portions. First portion will be the design and construction of the 13.5 km railway which includes the immersed tunnel for the Bosphorus crossing, 4 underground deep stations and tunnel systems under the city (The Bosphorus Tunnel Crossing), and the other portion will be the upgrading of the Commuter Rail System Project, including signalling, communication, operation, maintenance facilities and rolling stock.

The Bosphorus Crossing including the deep stations and related Electrical & Mechanical Systems will be financed by the Japan Bank for International Co-operation, Japan. The Commuter Rail System Project will be financed via other sources.



The upgraded Commuter Rail System Project will extend from Halkalı in Europe to Gebze in Asia. The length will be approximately 76 kilometres and the project will contain 41 upgraded or new stations. The Bosphorus railway tube tunnel crossing will go underground at Yedikule, pass Yenikapı and Sirkeci stations, the Bosphorus and Üsküdar station, and emerge at Soğutlucesme. The deepest point of the tunnel will be approximately 55 metres under the water surface level.



A new underground Yenikapı Station will be constructed. Integration and passenger transfer options to and from the Metro system, the inter-city trains and the Yenikapı - Atatürk Airport light rail system will be provided. The picture shows a potential architectural solution to the station.



WHAT IS THE MARMARAY PROJECT?

The Marmaray Project provides an upgrading of the commuter rail system in Istanbul, connecting Halkalı on the European side with Gebze on the Asian side with an uninterrupted, modern, high-capacity commuter rail system.

Railway tracks in both sides of Bosphorus will be connected to each other through a railway tunnel connection under the Bosphorus. The line goes underground at Yedikule, continues through the Yenikapı and Sirkeci new underground stations, passes under the Bosphorus, connects to the Üsküdar new underground station and emerges at Soğutlucesme.

This Project is one of the most important projects in the world at present. The entire upgraded and new railway system will be approximately 76 km long. The main structures and systems, include the immersed tube tunnel, bored tunnels, cut-and-cover tunnels at - grade structures, four new underground stations, 37 surface stations (renovation and upgrading), operations control centre, yards, workshops, maintenance facilities, upgrading of existing tracks (including a new third track on ground), completely new electrical and mechanical systems and procurement of modern railway vehicles.

OBJECTIVES OF THE MARMARAY PROJECT

- Participate in a long-term solution to the current urban transportation problems.
- Relieve existing operating problems on the mainline railway services.
- Increase reliability, accessibility, punctuality and safety on the commuter rail services.
- Reduce travel time for railway passengers.
- Provide an uninterrupted transportation across the Bosphorus.
- Reduce air pollution resulting from the exhaust gases and thereby improve the air quality of Istanbul.
- Reduce airborne traffic noise in the centre of Istanbul
- Reduce adverse effects on historical buildings and heritage sites

TUNNELS AND EARTHQUAKE

Underground structures like the future tunnels under the Bosphorus have proven to be very safe structures in case of earthquake. Several similar types of tunnels around the world have proven their strength and have survived severe earthquakes of the same magnitude as may be experienced in the Istanbul area, without any damage. The Kobe tunnels in Japan and the BART tunnel in San Francisco in the USA are good examples of how robustly such tunnels can be constructed. On the Marmaray Project, in addition to existing data, additional data will be collected from geological, geotechnical, geophysical, hydrographical and meteorological investigations, and such data will form the basis for the design and construction of the tunnels, using the most modern technologies of civil engineering. Such structures will therefore be able to resist the highest possible intensity and magnitude of potential impact from natural events, including an estimated earthquake of the maximum intensity that may be expected in the area. Some of the best national and international experts and professors have been involved in the studies and evaluations up till now and will also be involved till the completion of the project.



The immersed tube tunnel under the Bosphorus will contain two adjacent tubes, and it will be fully embedded in the seabed with a minimum of two metres of rock protection. Under normal conditions, there will be one-way traffic in each tube, with a headway as low as 120 seconds between the trains during rush hours.



The area of Sirkeci contains many very old historical buildings and heritage sites. The station will therefore be constructed as a fully underground station, affecting only such heritage sites to an absolute minimum. The picture shows a potential architectural solution to the station at Sirkeci.

FACTS AND FIGURES OF THE MARMARAY PROJECT

The following figures give approximate information regarding the design:

Total length:	76.3 km
European side:	19.6 km
Asian side:	43.4 km
Immersed tube tunnel:	1.6 km
Bored tunnel:	8.9 km
Cut-and-cover and open cut:	2.8 km
Maximum Depth of immersed tube tunnel:	55 m
Number of stations:	37
- Existing stations to be upgraded/rebuilt:	4
- New underground stations:	
Length of platform, minimum:	180 m
Type of platform:	Centre platforms
Max. peak capacity per hour per direction:	
- Existing commuter rail:	10.000 passengers
- Upgraded commuter rail:	75.000 passengers
Design speed:	120 km/hour
Maximum operational speed:	100 km/hour
Expected mean speed:	45 km/hour
Headway (time between trains):	120 – 600 seconds
Number of new vehicles:	Up to 670
Travel time total between Gebze and Halkalı:	
- Existing commuter rail and ferries/taxi to or from boat:	185 minutes (railway – ferry – railway)
- New and upgraded uninterrupted commuter rail:	104 minutes

Istanbul, a world-class city with a population of 10 million, is the industrial, trade and education centre of Turkey. 20% of the total economic production of Turkey is created in Istanbul. The city is spread out over two continents, contains more than 25% of Turkey's total number of motorised vehicles and 30% of all automobiles. More than 12 million trips are made daily using these vehicles and the available mass transit facilities.

Urban transportation has over decades become the most critical problem for the continued development of economic and cultural activities. While transportation normally facilitates city life and commerce, it has for Istanbul become the main obstacle to the continued development of the city.

The level of traffic between the Anatolian side, where the housing areas are mainly located, and the European side, where the centres of trade and commerce are principally located, is causing many delays in the daily life of those living and working in Istanbul. Time wasted in traffic jams and accidents, polluted air and excessive noise, are seriously threatening the health and wealth of the city.

Developing an efficient and high-capacity railway solution will, by using electrical energy, reduce the pollution caused by car traffic, will reduce the dependency on highways and private transportation and will prevent the use of transport arteries as car parking areas. Such a system will therefore contribute to a continuation of the development of the city and create a modern transportation link as the basis of modern metropolitan life.

The Marmaray Project has to be seen as the backbone of the transport system in Istanbul. Uskudar-station on the Anatolian side and Yenikapi Station on the European side will take over the transfer function for all the existing and future passenger rail transport systems in Istanbul. The following transport systems will or may be integrated with the Marmaray Project:

- The Metro (Yenikapi - Taksim - Sığı - 4, Levent - Ayazaga)
- The light rail transport system (Yenikapi - Yenibosna - Atatürk Airport)
- The light rail transport system (Esenler - Mahmudbey)
- The light rail transport system (Uskudar - Umranıye)

The latest technology in safe tunnelling methods and railway technology will be used for the Marmaray Project. The picture shows a typical gauge of a bored tunnel.



The elements may be produced as large steel shells. After the shell is produced, the structural concrete will be cast inside the element to provide sufficient strength to resist the significant forces that will be introduced due to the great water depth in the Bosphorus. The immersed tube tunnel will be the deepest tunnel of this type ever constructed in the world.



The city of Istanbul is one of the very few major cities around the world that can trace its civilisation as far back in time as approximately 7,000 years. The city has a large number of invaluable buildings and treasures. The challenge of constructing large transportation infrastructure in the heart of such a city can best be met by constructing the traffic arteries as underground structures. The dotted line indicates the alignment of the railway under the Bosphorus and Uskudar.



DLH

MARMARAY PROJECT

TRAFFIC REPORT

**Republic of Turkey
MINISTRY OF TRANSPORT
General Directorate of Railways, Harbour and Airport
Construction (DLH)**

TRAFFIC FORECASTS OF THE MARMARAY PROJECT

Transportation Model

Traffic forecasts of the Marmaray Project have been made by using a conventional four-step transport model. The model was initially calibrated with the data collected in 1996 as a part of the Istanbul Transport Master Plan (IUAP) that was prepared by Istanbul Technical University (ITU) between 1995 and 1998.

The model has been revised and the validity of the model results have been checked by using data collected in 2002 and 2003. Main characteristics of the demand forecasting model are summarized below.

Zoning

The metropolitan area of Istanbul was divided into 211 zones (2 external zones) to predict the trip matrices. Zone system is based on the smallest administrative district (mahalle) (Figure 1). The data for population, employment and number of students enrolled in the schools in each zone have been collected for the base year 2003.

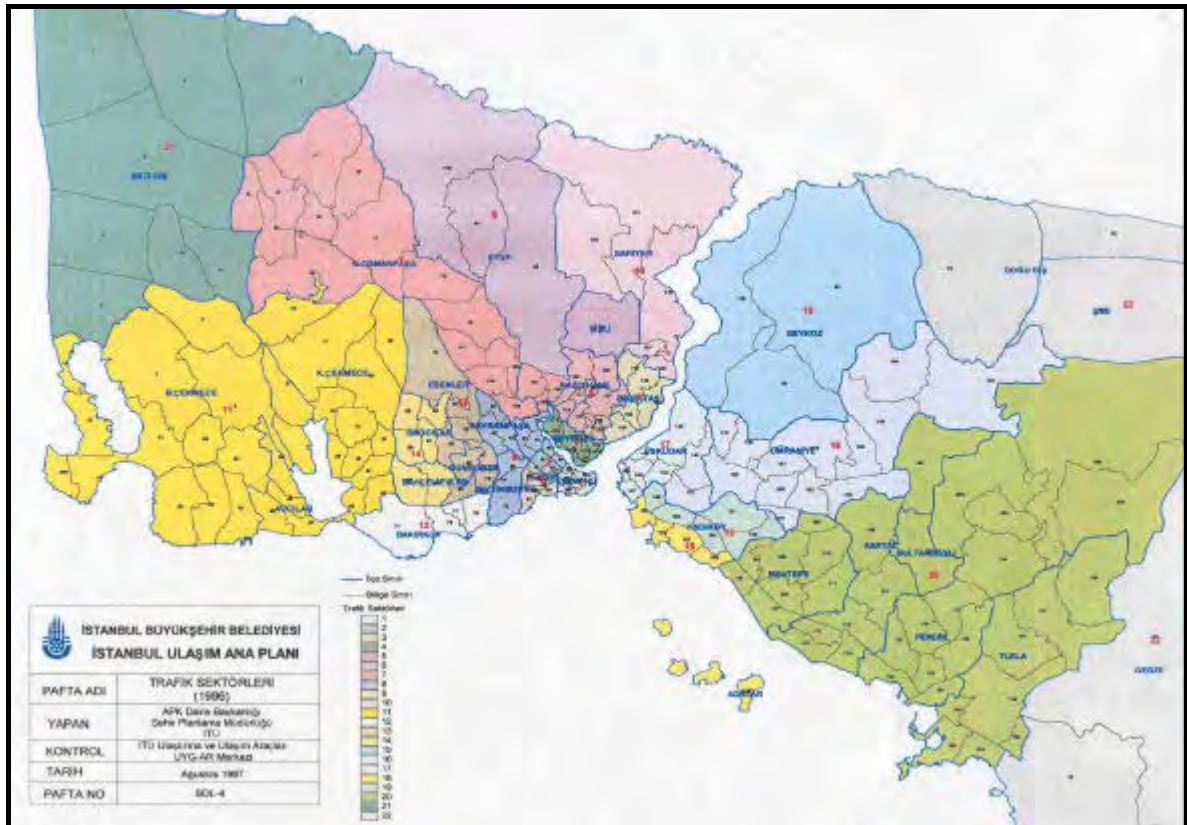


Figure 1: Traffic Zones

Highway Network

An extensive highway network was modeled in the metropolitan area of Istanbul. All major roads and intersections have been included in the road network (Figure 2). The network was connected with the zones by appropriate centroid connectors representing the average travel costs and times to access the transport network.

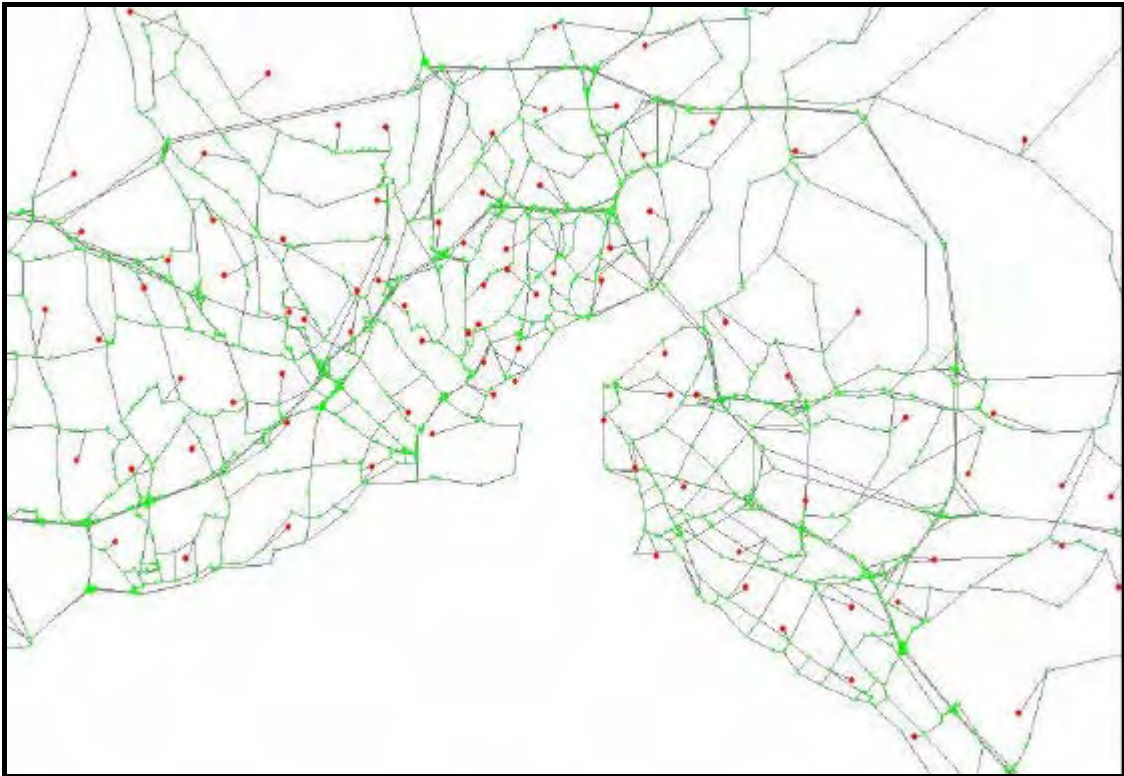


Figure 2: Highway Network

Public Transport System

All public transport modes being operated in the city have been considered in the model (Figure 3). Routes, peak and off-peak service frequencies, fares and average commercial speeds have been coded to estimate the travel times and costs between each origin-destination (O-D) zone pair.



Figure 2: Public Transport Network (2003)

Future Land - Use Plan

A strategic land-use development plan for the city for 2010 was prepared by the Greater Municipality of Istanbul in 1995. Based on the major land-use developments adapted in this plan, future land-use data of the traffic zones (population, employment and number of students) have been estimated for a period between 2009 and 2030 (Figure 3).

Future Travel Matrices and Trip Rates

Trips to be generated from and to be attracted to each zone for each trip purpose in the future have been estimated by using trip generation and attraction rates and land use data. Trip rates (number of daily trips per capita) are estimated to increase as a result of the socio-economic development of the population. Four trip purposes have been considered in the analysis:

- a) Home-based work trips (HBW)
- b) Home-based school trips (HBS)
- c) Home-based other trips (HBO)
- d) Non-home-based trips (NHB)

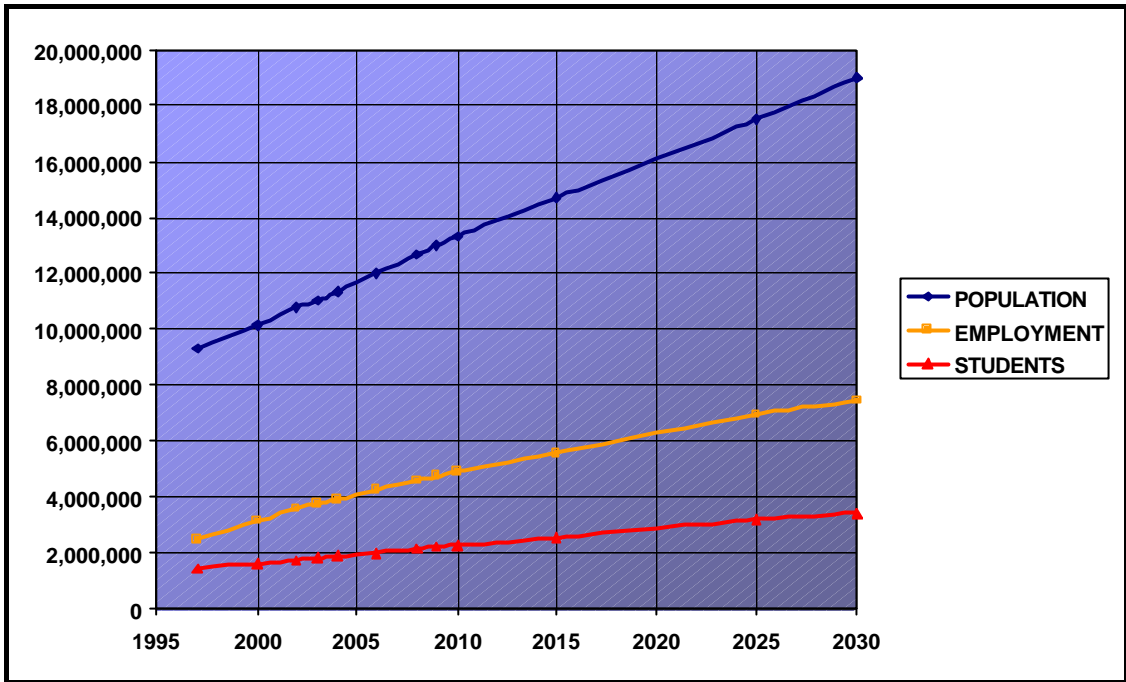


Figure 3: Projections for Plan Data

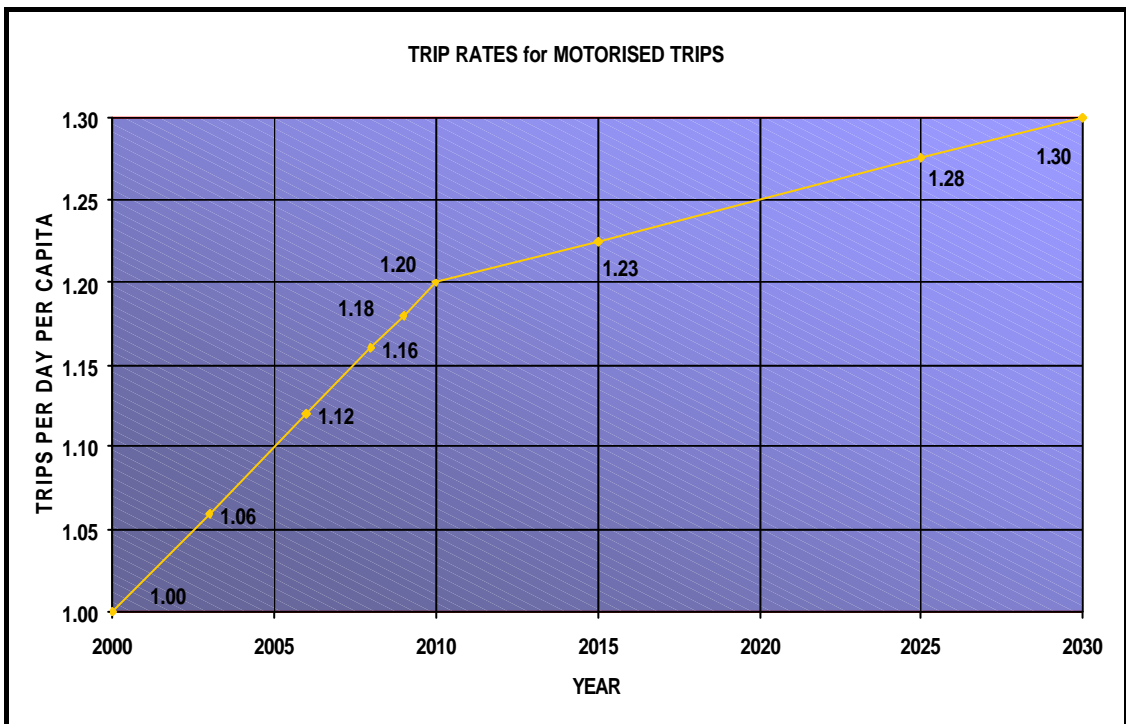


Figure 4: Trip Rate Projection

The average trip rates for vehicular trips are estimated and shown in Figure 4.

Future public transport matrices have been estimated from the gravity model calibrated in the IUAP and the modal-split model revised with the data in 2003.

Car Ownersip

Motorization has increased eight times between 1980 and 2002, while population has increased 112 % in Istanbul.

	1980	2002
Population (Million)	4.7	10
Cars (000)	201	1600
Motor Vehicles (000)	281	2268

Future car ownership (number of private cars per 1000 inhabitants) has been estimated for a saturation level of 550 cars per 1000 inhabitants (Figure 5).

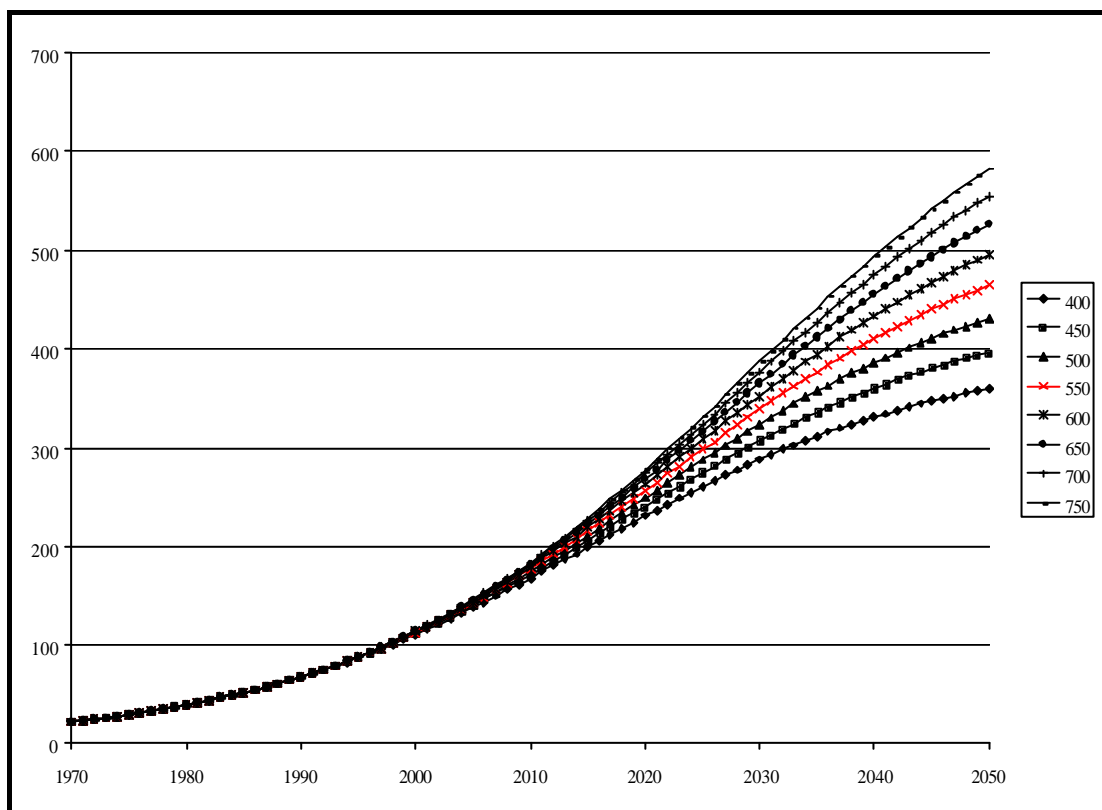


Figure 5: Car Ownership Projection

Predicted Traffic of the Marmaray Project

A public transport traffic assignment model has been used to predict the traffic on the public transport system in the future. The model assigns the public transport matrix on to the future public transport network so as to minimize the generalized travel cost between each origin - destination zone pairs. The generalized cost of a trip is calculated as the sum of the total travel cost and the value of travel time spent for the trip.

The future public transport traffics have been estimated for a) AM peak hour, and b) Average off-peak hour. AM peak hour matrix has been used to estimate the future AM peak hour trips and traffic volumes (passengers per hour per direction) on the project. AM peak hour traffic is estimated as 10 % of daily traffic. Average off-peak hour traffic matrices for each of the trip purposes have been estimated based on the HH travel survey data (Table 1 and 2). Average off-peak traffic is estimated as 5.22 % of daily traffic.

Table 1: Trip Distribution in a Weekday (%)

HOURS	HBW	HBS	HBO	NHB	TOTAL
0-1	0.00	0.00	0.00	0.00	0.00
1-2	0.00	0.00	0.00	0.10	0.02
2-3	0.02	0.11	0.00	0.00	0.02
3-4	0.02	0.09	0.00	0.00	0.02
4-5	0.25	0.09	0.00	0.10	0.16
5-6	7.00	8.00	1.00	1.00	5.09
6-7	9.43	9.49	2.64	1.92	7.01
7-8	11.10	10.50	3.95	4.02	8.59
8-9	13.00	11.10	5.01	4.98	10.01
9-10	5.55	4.58	7.78	8.40	6.28
10-11	0.43	1.03	9.27	6.14	3.03
11-12	0.81	7.13	9.74	10.87	4.90
12-13	0.61	7.02	8.64	10.26	4.48
13-14	0.43	4.09	9.43	8.65	3.88
14-15	0.83	6.77	7.94	5.94	3.75
15-16	2.10	11.15	7.71	7.34	5.19
16-17	7.15	8.60	8.08	10.36	8.03
17-18	9.97	7.43	6.06	10.56	9.01
18-19	11.03	1.90	5.80	5.73	7.99
19-20	10.40	0.55	3.17	1.91	6.38
20-21	7.73	0.13	2.02	1.01	4.58
21-22	1.83	0.15	1.25	0.40	1.27
22-23	0.31	0.09	0.51	0.30	0.32
23-24	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00

Table 2: Peak and Off-Peak Traffic in a Weekday (%)

	Hours	(%)
AM PEAK	2	18.6
PM PEAK	2	17.0
OFF PEAK	12	62.6
NIGHT	8	1.8
TOTAL	24	100.0

Traffic Conversion Factors

The transportation model runs with AM the peak hour trip matrices. Based on the traffic counts made in 2003 in Istanbul the peak hour / daily traffic ratio is found as 0.10.

The average daily traffics on weekdays, weekend and the average annual daily traffic (AADT) have been calculated as follows from the traffic data collected through the electronic ticketing system (Akbil) used in the city buses in 2002 (Table 3) .

Table 3: Daily Traffic Data of Municipality Buses

	Bus Traffic	Index
Weekday	966,703	1.000
Saturday	682,171	0.706
Sunday	409,810	0.424
AADT	846,829	0.876

Daily traffic figures have been converted into annual figures by using a conversion factor of 320 (0.876x365).

Fare Structure

Present public transport fare levels have been used in the analysis. The existing policy of applying reduced fares for students, elderly and other eligible categories of users is expected to be retained. The average base fare is \$ 0.60 per trip. Two fare prices have been used to estimate the Marmaray Project traffic crossing the Bosphorus (BC):

- a) A flat rate irrespective of the distance of the journey, i.e., no additional charge for the journeys crossing the Bosphorus.
- b) An additional charge of \$ 0.60 for the journeys crossing the Bosphorus.

Other Rail Transit Projects in the Do-Minimum Network

In addition to the existing rail transit lines in Istanbul, the following rail transit projects are considered in the do-minimum rail network in the future:

- 4. Levent-Yenikapi metro line (Yellow line in Fig.6.)
- Otogar-Bagcilar LRT line (East-west extension of blue line in Fig. 6.)

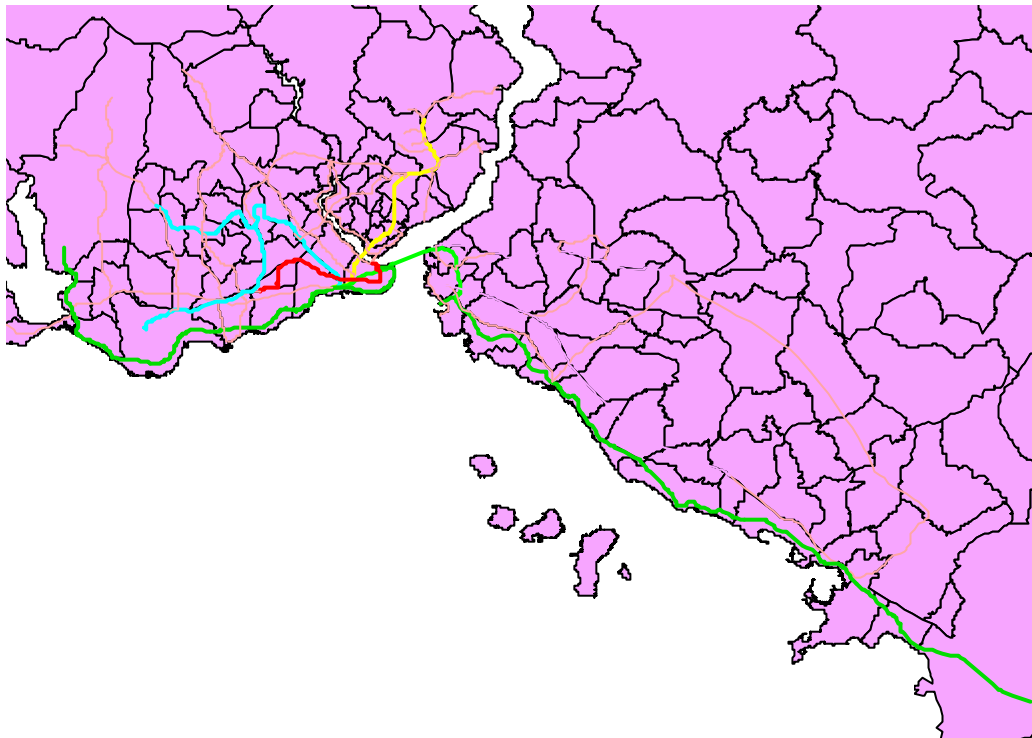


Figure 6: Do-Minimum Rail Network

At the average base fare of \$0.60, daily and annual traffic of the Marmaray Project are shown in Tables 4 and 5 and Figure 7 to 10.

Table 4: Daily Traffic at the Average Base Fare of \$0.60

Year	Flat Fare			Double Fare for BC		
	BC	LOCAL	TOTAL	BC	LOCAL	TOTAL
2009	827,860	249,710	1,077,570	587,310	249,710	837,020
2015	987,030	511,000	1,498,030	741,400	511,000	1,252,400
2025	1,046,910	638,950	1,685,860	927,680	638,950	1,566,630

Table 5: Annual Traffic at the Average Base Fare of \$0.60

Year	Flat Fare			Double Fare for BC		
	BC	LOCAL	TOTAL	BC	LOCAL	TOTAL
2009	264,915,200	79,907,200	344,822,400	187,939,200	79,907,200	267,846,400
2015	315,849,600	163,520,000	479,369,600	237,248,000	163,520,000	400,768,000
2025	335,011,200	204,464,000	539,475,200	296,857,600	204,464,000	501,321,600

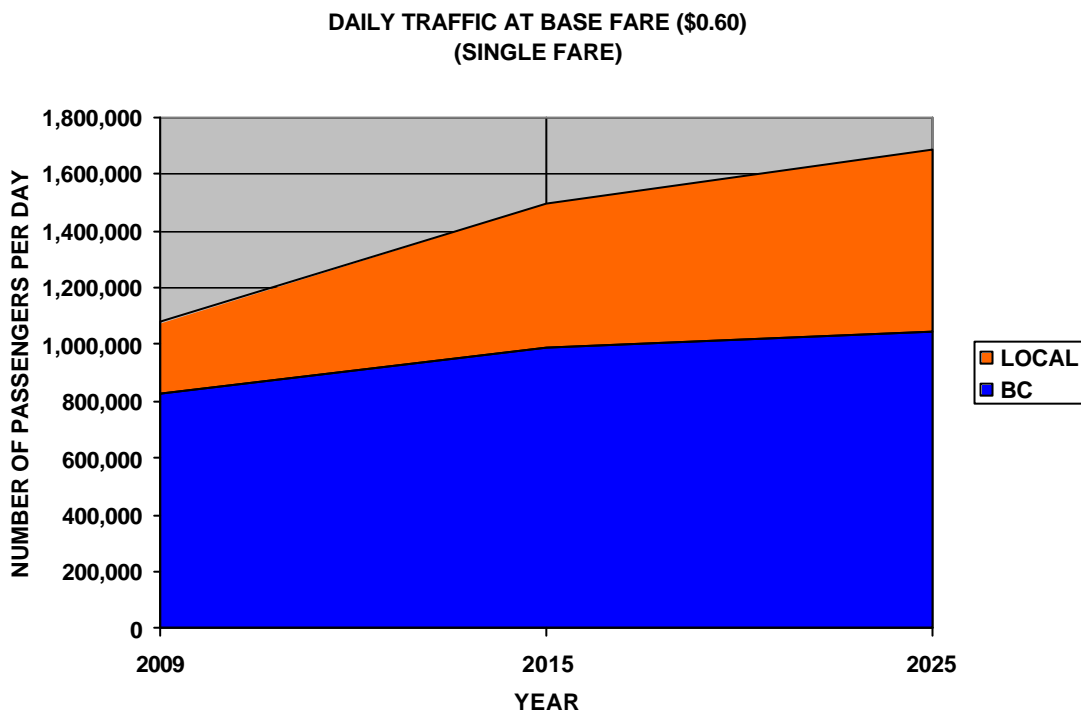


Figure 7: Daily Traffic at the Average Base Fare of \$0.60 (Flat Fare)

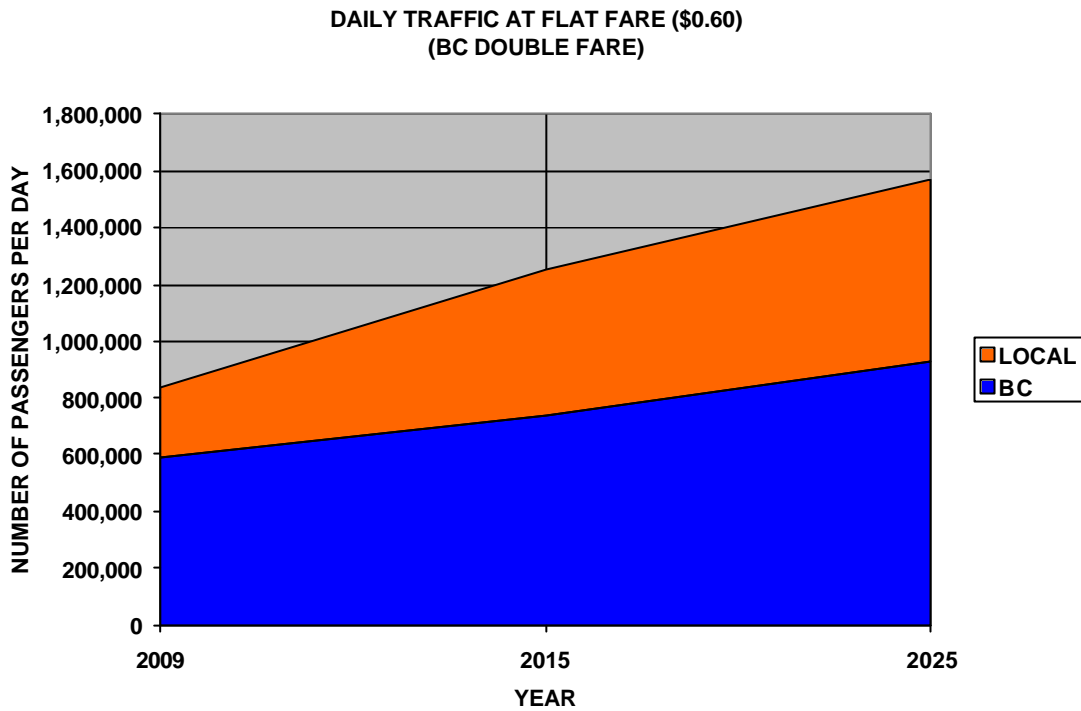


Figure 8: Daily Traffic at the Average Base Fare of \$0.60 (\$1.20 for BC)

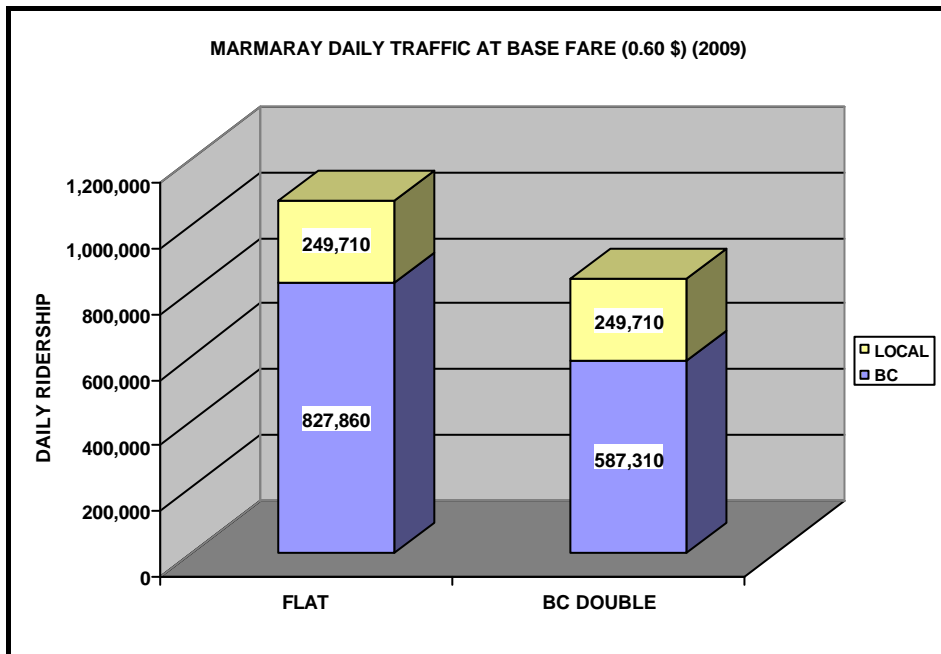


Figure 9: Daily Traffic at the Average Base Fare of \$0.60 (2009)

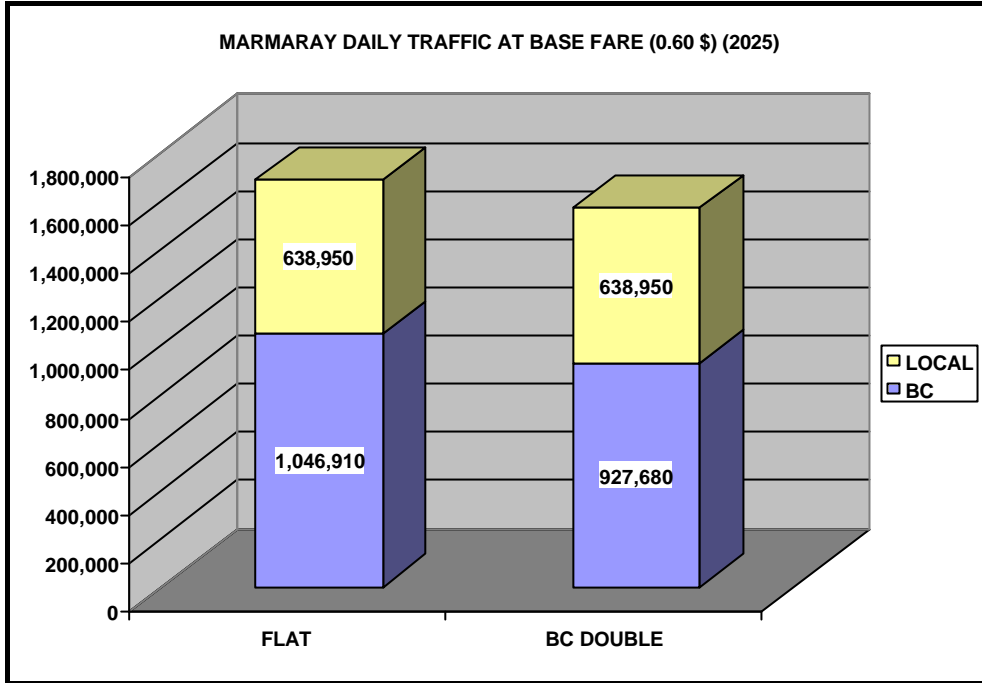


Figure 10: Daily Traffic at the Average Base Fare of \$0.60 (2025)

Sensitivity of the Project Traffic with respect to Fare Prices

Sensitivity tests have been carried out to estimate the effects of the fare price on the project traffic and annual revenue. The results of the sensitivity tests are shown in Table 6 and 7, and Figure 11 and 12.

Table 6: Changes of the Project Daily Traffic With Respect To Fare Price

Base Fare (\$)	Local	Flat Fare		BC Double Fare	
		BC	Total	BC	Total
0.60	638,950	1,046,910	1,685,860	927,680	1,566,630
0.67	591,513	1,045,426	1,636,939	886,056	1,477,569
0.80	521,491	1,038,290	1,559,781	789,848	1,311,340
1.00	413,456	1,029,591	1,443,047	678,886	1,092,342
1.07	406,475	1,025,434	1,431,909	638,586	1,045,061
1.20	335,888	1,018,716	1,354,604	557,192	893,080

Table 7: Changes of the Project Annual Revenue With Respect To Fare Price (Million \$)

Base Fare (\$)	Flat Fare	BC Double Fare
0.60	323.7	478.9
0.67	349.2	504.2
0.80	399.3	537.9
1.00	461.8	566.8
1.07	488.8	574.7
1.20	520.2	556.9

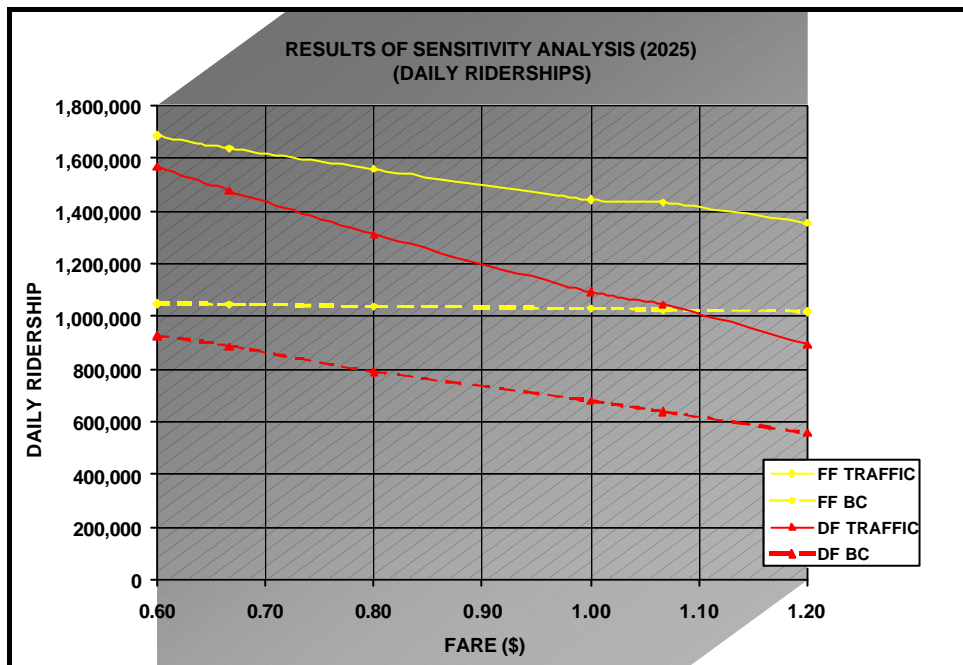


Figure 11: Changes of the Project Daily Traffic With Respect To Fare Price

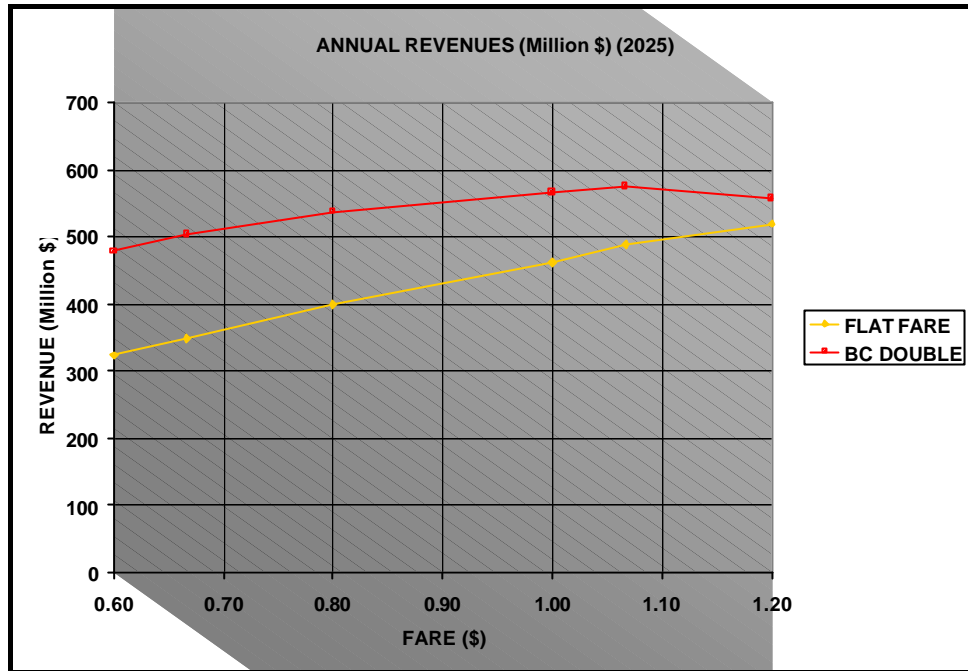


Figure 12: Changes of the Project Annual Revenue With Respect To Fare Price

Effects of the Kadiköy-Kartal LRT Project on the Project Traffic

Other major rail transit projects that have not been included in the do-minimum network are as follows:

Kadiköy-Kartal LRT project (Blue line in Fig. 13 and 14.)

Üsküdar-Ümraniye LRT project (Yellow line in Fig. 13 and 14.)

Sensitivity test have been carried out to estimate the effects of the Kadiköy-Kartal LRT line on the traffic of the Marmaray Project in 2025. Table 8 shows the estimated daily project traffic with and without Kadiköy-Kartal LRT project, assuming double fare for BC trips in 2025.

Table 8: Kadiköy-Kartal LRT Project and Daily Project Traffic in 2025

	BC	LOCAL	TOTAL
w/o KK	927,680	638,950	1,566,630
with KK	949,940	626,050	1,575,990

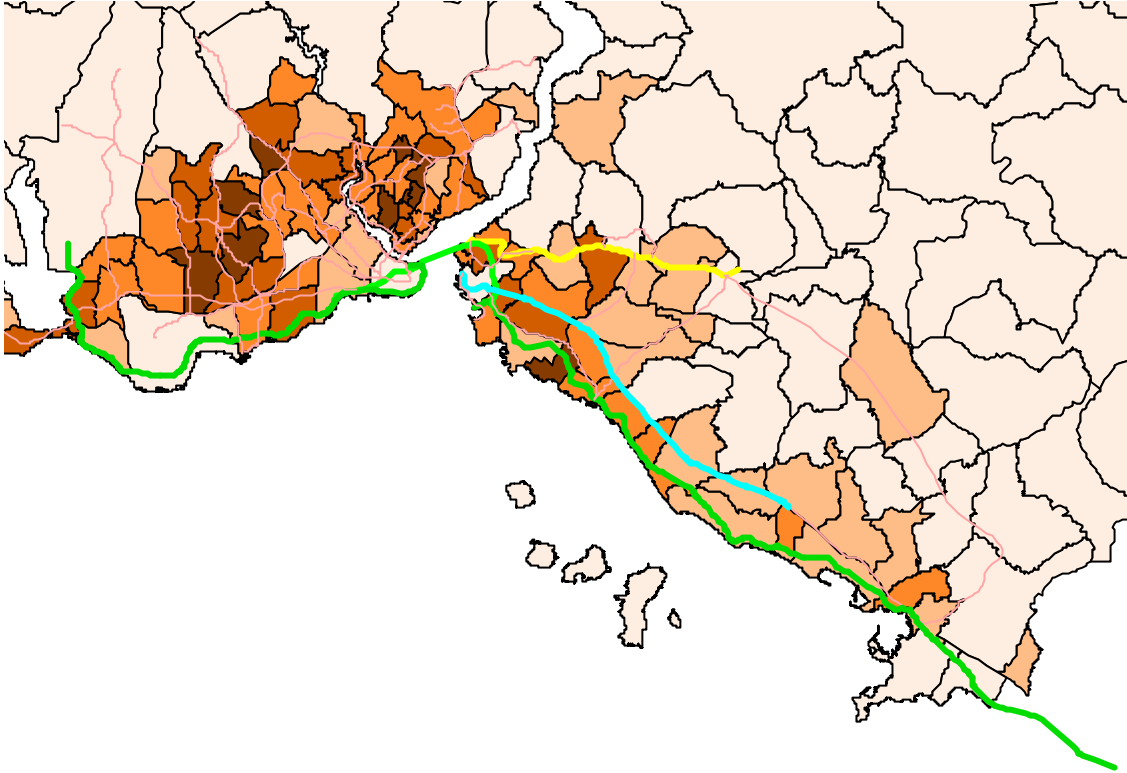


Figure 13: Population Density in 2025

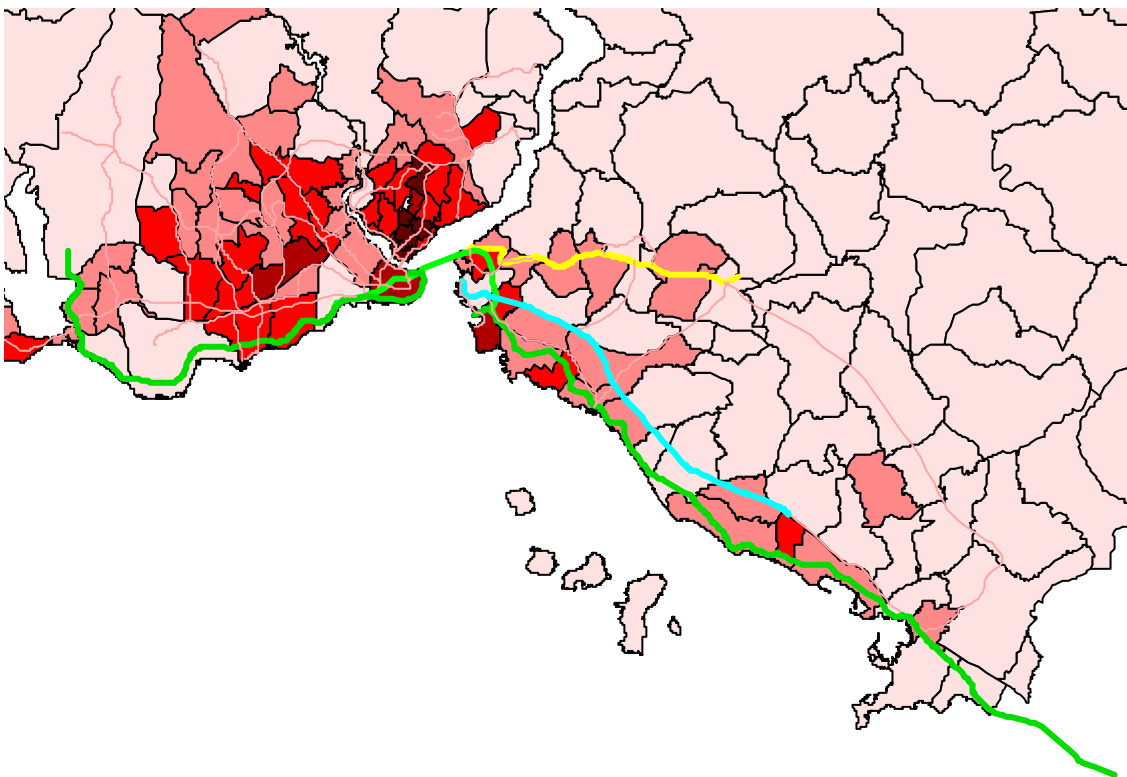


Figure 14: Employment Density in 2025

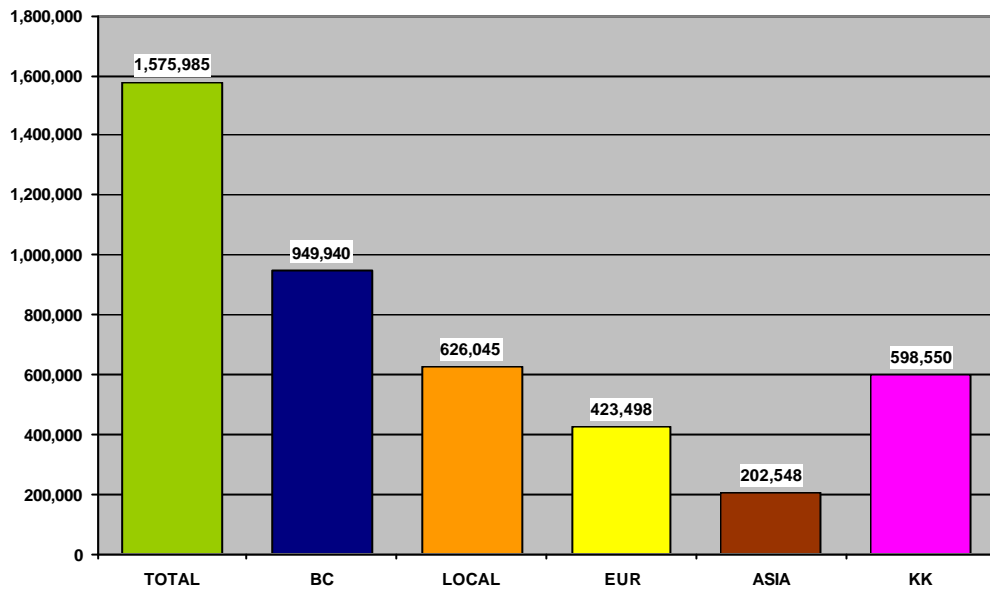


Figure 15: Daily Traffic of the Marmaray project with the KK LRT Project in 2025

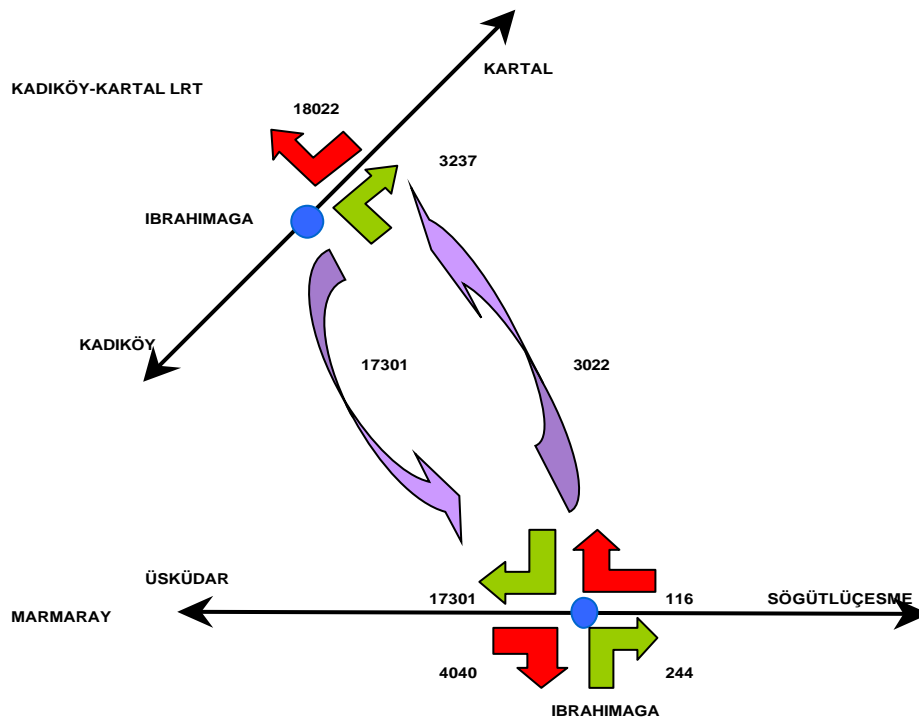


Figure 16: Transfers at Ibrahimaga Station in 2025

Kadiköy-Kartal LRT project causes a minor decrease in the local traffic of the project on the Anatolian side. But since this line feeds the project at Ibrahimaga interchange station and increases the traffic on the BC section, the total traffic with KK line is estimated as slightly greater than that in without KK line (Figure 16).

Traffic Loads at Stations

AM peak hours traffic loads at stations of the Marmaray Project are shown in Figures 17 to 19. Average off-peak hour loads are shown in Figure 20 to 22.

Total Travel Time Saved

In addition to the traffic forecasts, some major system performance characteristics such as the total passenger-kms, the total passenger-hours of each mode for “with” and “without” project cases have been obtained from the transport model. Total annual passenger hours saved have been calculated as the difference between "without" and "with" project cases, which represented the total travel time saved by the public transport users and passengers switching from car to public transport as a result of the project (Table 9). The “with project” case has been considered as the case with an additional charge of \$ 0.60 for the journeys crossing the Bosphorus.

Table 9: Travel Time Savings (Difference Between With and Without Cases)

Year	Passengers Switching From Car to PT		PT Users		Total Time Saved (h/year)
	Reduced Daily Car Trips	Travel Time Saved (h/day)	Travel Time Saved (h/year)	Travel Time Saved (h/h)	
2009	40,239	2,373	759,432	3,707	11,861,692
2015	96,226	16,342	5,229,443	6,283	20,105,252
2025	84,050	23,738	7,596,310	8,862	28,358,624

Comparison of the Traffic Forecasts of Transport Studies

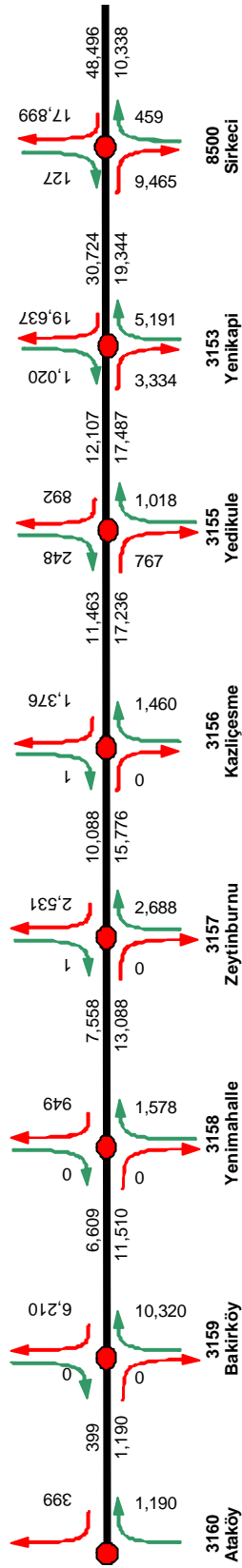
The main inputs and outputs of the Mot Transport Study (1997-98) and the revised transport study of the IUAP (2003) are summarized in Table 10.

Table 10: Comparison of the Forecasts of Transport Studies

Study	MoT-DLH	IUAP (Revised)
Year	1997-98	2003
Transportation Model	Tranplan	Tranplan
Number of Zones	177	211
Population (2015)	13,413,078	14,726,710
Working Population (2015)	5,841,214	5,556,920
Students (2015)	590,480	2,560,628
Working Population Ratio (%)	43.5	37.7
Students Ratio (%)	4.4	17.4
Trip Rate	1.11	1.23
Total Motorised Trips per Day	14,888,517	18,113,853
Peak Hour Ratio (%)	9.5	10
Annual Conversion Factor (Year /Day)	330	320
Base Fare Price (\$)	0.60	0.60
Fare Structure	Flat	Flat
Daily Project Traffic (2015)	2,169,092	1,498,030
Daily BC Traffic (2015)	1,093,579	987,030
Daily Local Traffic (2015)	1,026,421	511,000
Project Traffic / Total Traffic Ratio (%)	14.2	8.3
Max. Peak Hour Load on BC (pphpd)	65,337	75,000
Daily Traffic (2025)	2,423,393	1,685,860
Traffic Increase (2015-2025) (%)	14.3	12.5

BC: Bosphorus crossing

MARMARAY PROJECT (European Side)
PEAK HOUR LOADS (2009)



MARMARAY PROJECT (Asian Side)
PEAK HOUR LOADS (2009)

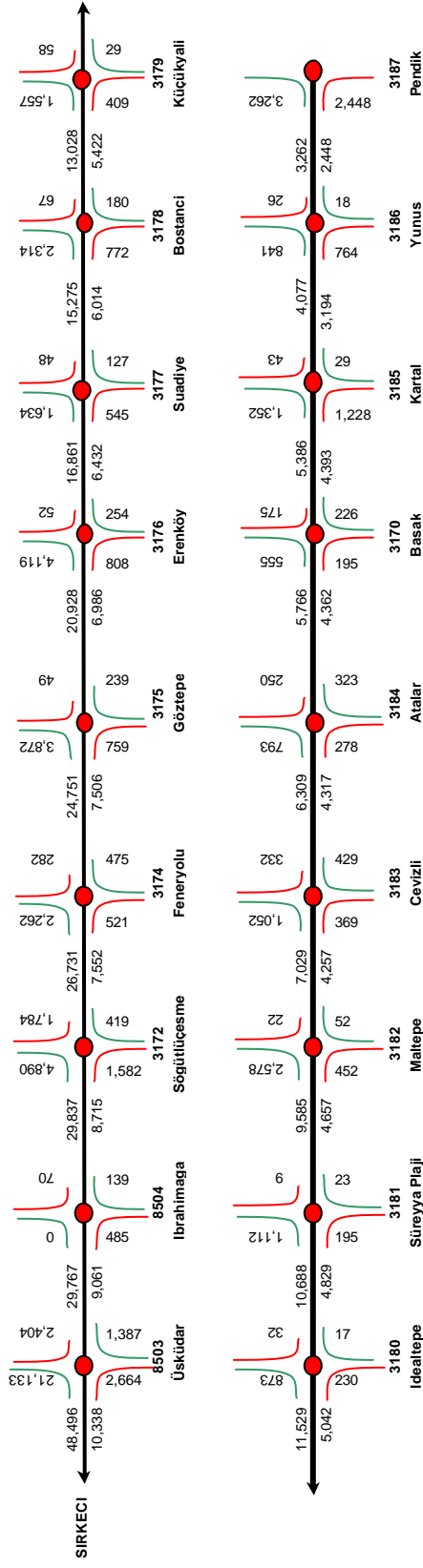


Figure 17: AM Peak Hour Traffic Loads at Stations in 2009

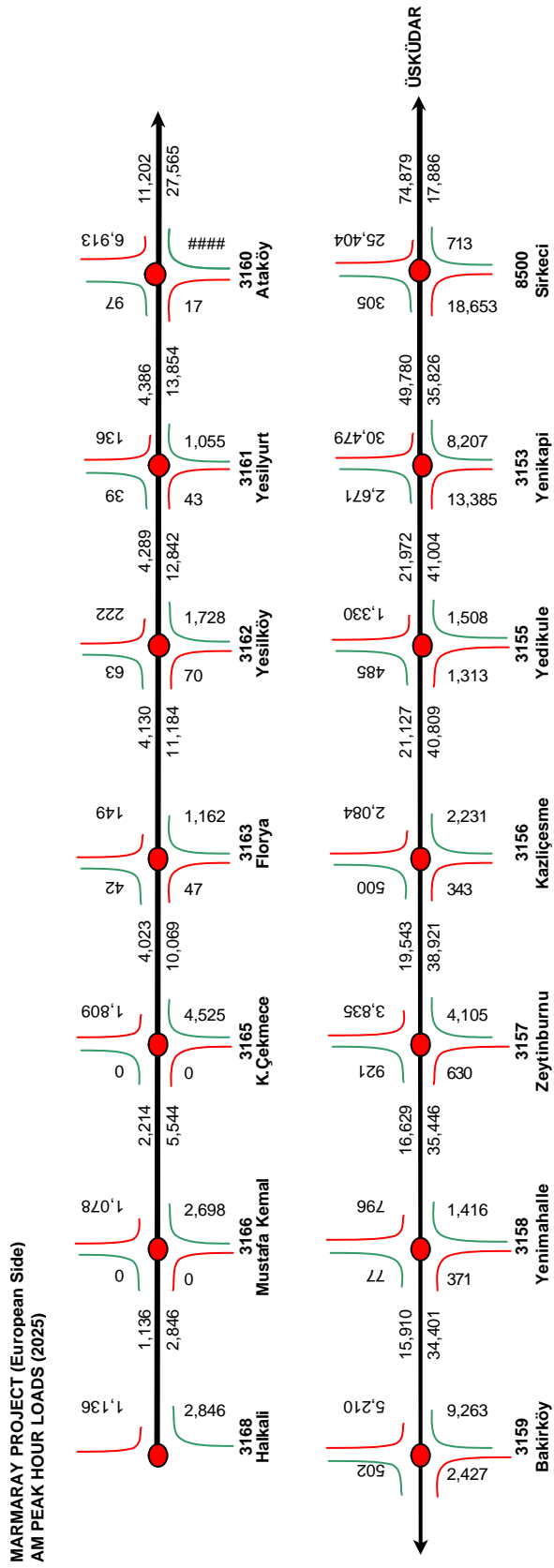


Figure 18: AM Peak Hour Traffic Loads at Stations in 2025 (European Side)

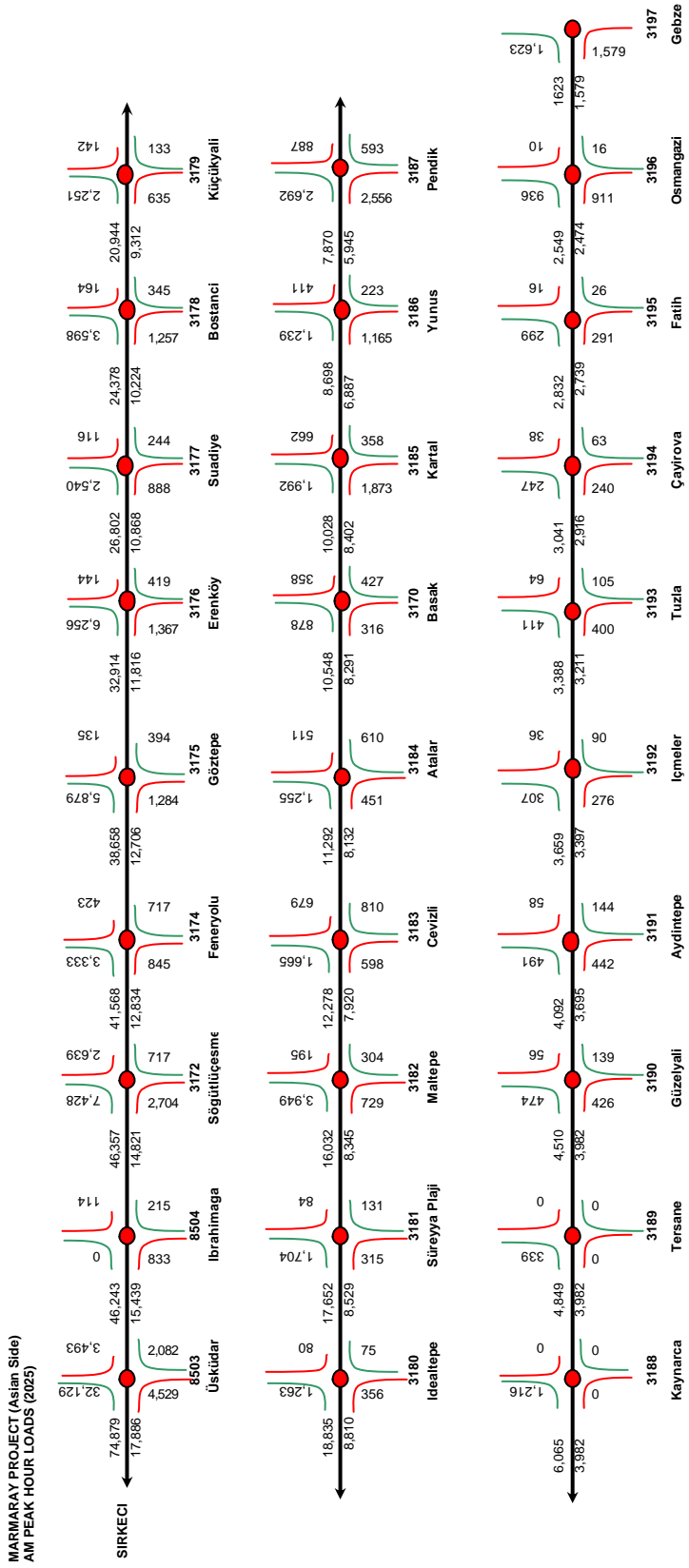
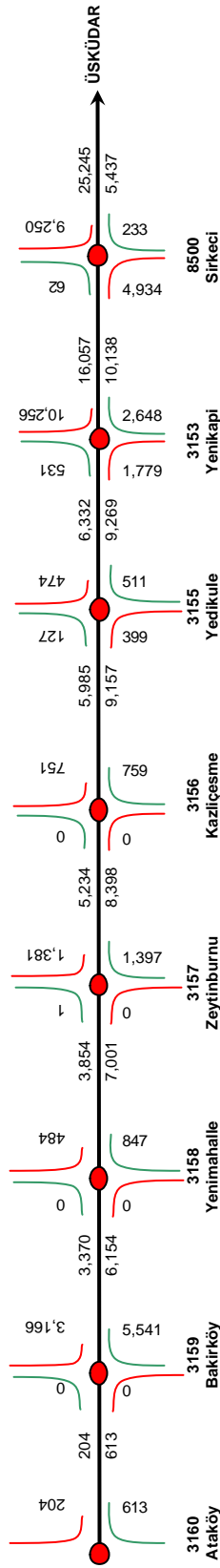


Figure 19: AM Peak Hour Traffic Loads at Stations in 2025 (Asian Side)

MARMARAY PROJECT (European Side)
OFF-PEAK HOUR LOADS (2009)



MARMARAY PROJECT (Asian Side)
OFF-PEAK HOUR LOADS (2009)

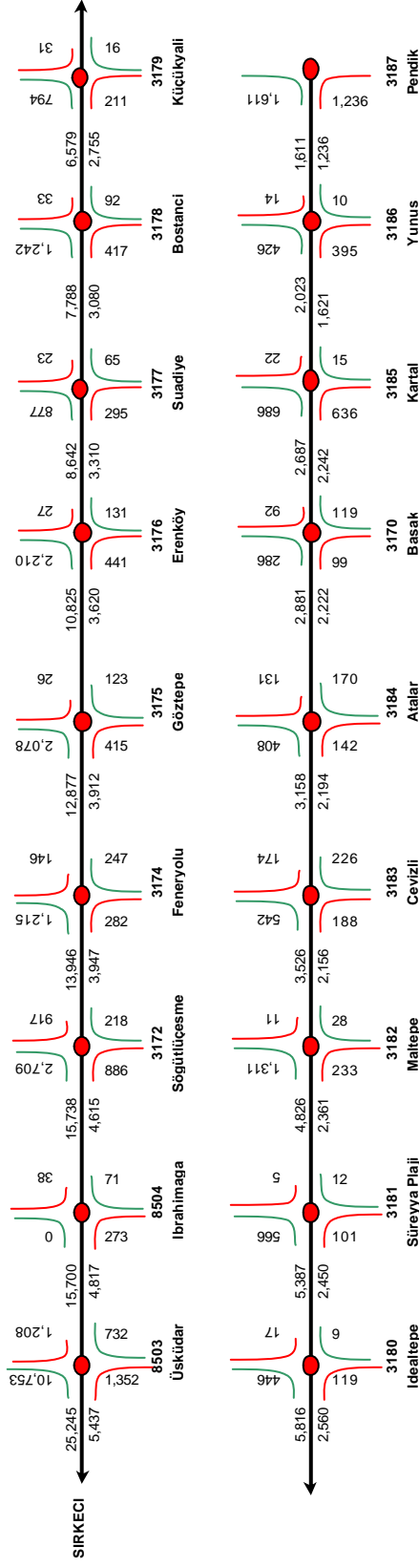


Figure 20: Average Off-Peak Hour Traffic Loads at Stations in 2009

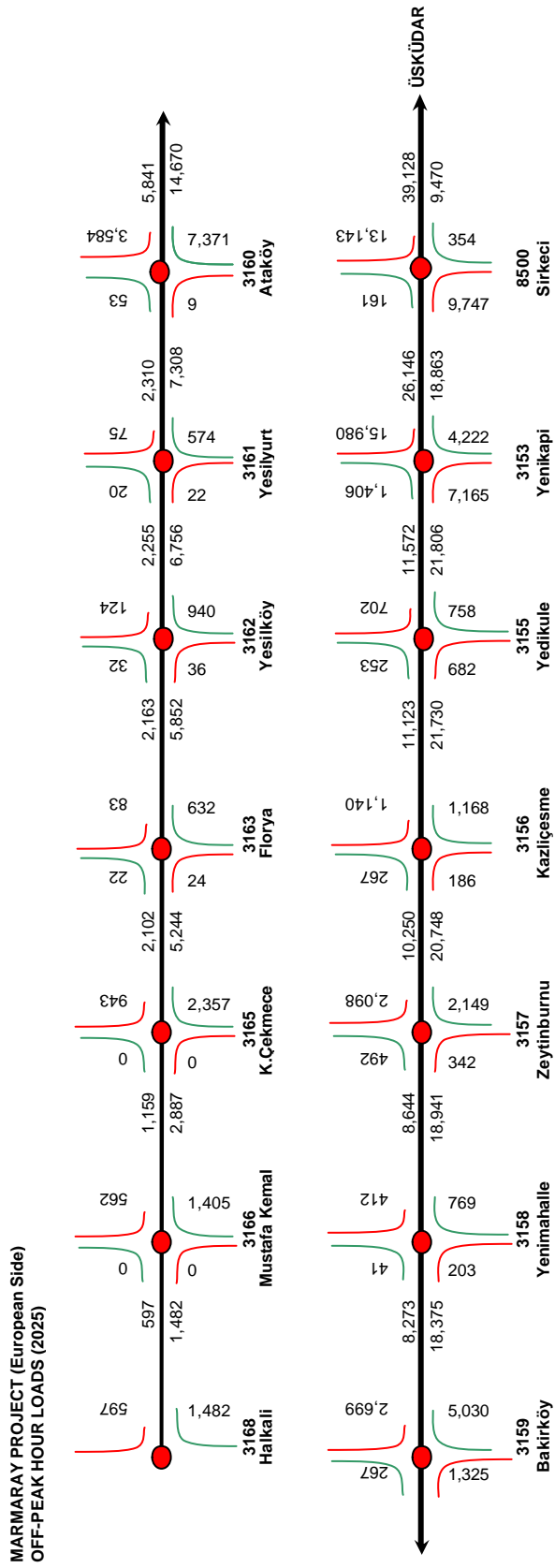


Figure 21: Average Off-Peak Hour Traffic Loads at Stations in 2025 (European Side)

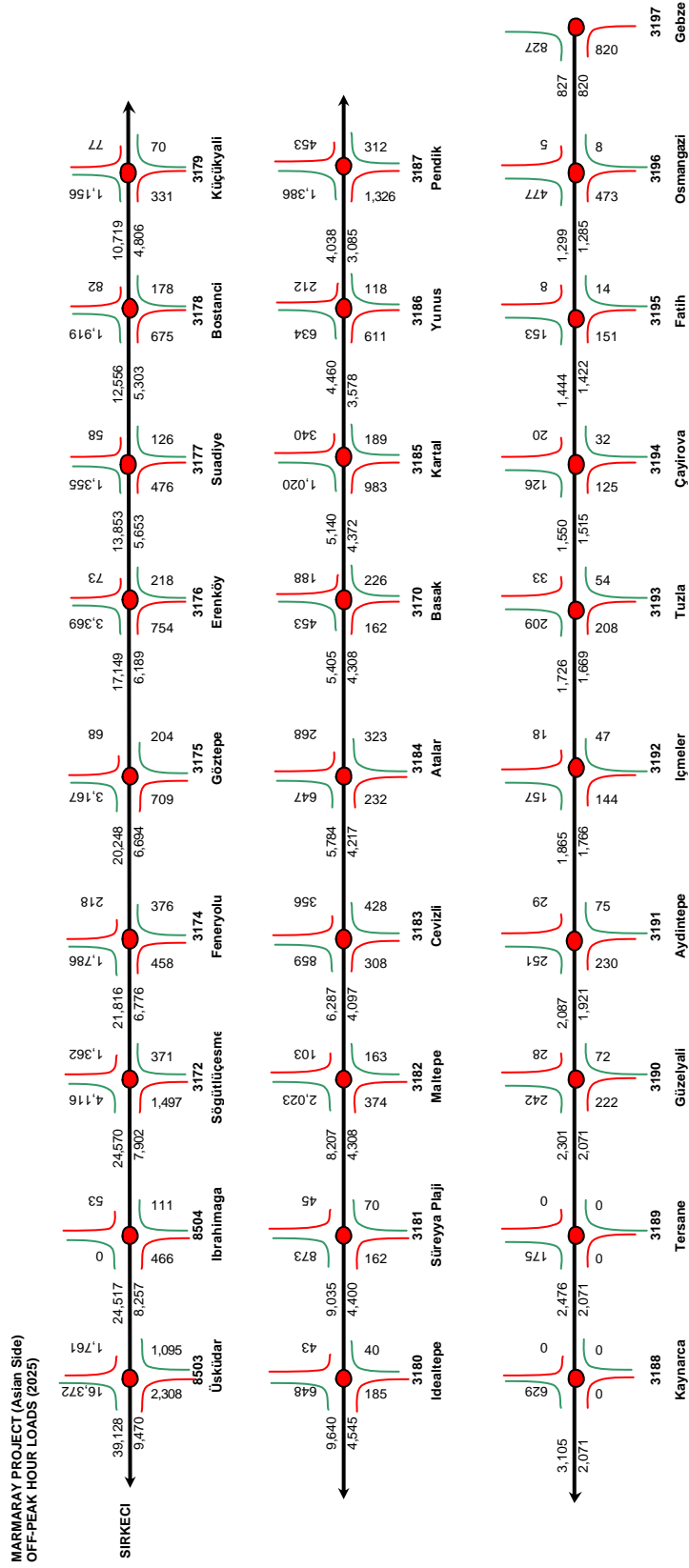


Figure 22: Average Off-Peak Hour Traffic Loads at Stations in 2025 (Asian Side)

REGULATIONS ON ENVIRONMENTAL IMPACT ASSESSMENT

OFFICIAL GAZETTE DATED 16 DECEMBER 2003 NUMBERED 25318 FROM THE MINISTRY OF ENVIRONMENT AND FOREST

SECTION ONE

Objective, Scope, Basis, Definitions

Objective

Article 1. The objective of this regulation is to set forth the administrative and technical methods and principles to be abided by during the Environmental Impact Assessment process.

Scope

Article 2. This regulation covers the followings:

- a) For which types of projects Environmental Impact Assessment Report and a Project Introduction File shall be required and the contents of them
- b) The administrative and technical matters that shall be abided by during an Environmental Impact Assessment process,
- c) Works related with the establishment of the Scoping and EIA Review Committee,
- d) Monitoring and auditing of the pre-operational, operational and post-operational of the projects that is within the scope of this regulation,
- e) Training works, required for the effective and widespread application of the Environmental Impact Assessment system in environmental management and the reinforcement of the institutional structure of the system

Basis

Article 3. This regulation has been prepared based on the Article 10 of the Environment Law of 9 August 1983 and No.2872.2.

Definitions and Abbreviations

Article 4. The meanings of some of the terms used in this regulation are as follows:

Ministry: Ministry of Environment and Forest.

Environment: The biological, physical, social, economic, and cultural medium in which living organisms maintain their relationships and interact throughout their lifetime.

Impact: The direct or indirect, temporary or permanent, short-term or long-term, favourable or adverse changes likely to occur in environmental elements during the preparation, construction, and operational phases or after the termination of a project.

Impact Area: The domain (area) which would be influenced favorably or adversely during the pre-operational, operational and post-operational phases of a project which is planned to be implemented,

Project: Application of construction works, other installations or plans related with an investment planned to be realized or production of underground resources.

Environmental Impact Assessment (EIA): The work to be carried out in the identification of the possible favourable or adverse impacts of projects that are planned to be implemented, in the determination and evaluation of the precautions to be taken in order to prevent or mitigate their adverse impacts so that they will not harm the environment, in the evaluation of the site chosen and of alternative technologies and in the monitoring and inspection of the application of projects

Environmental Impact Assessment Process: The process starting with the application made for the implementation of an environmental impact assessment as stated in Articles 8 and 16 herein, and ending with the determination of the fact that post-operational work has become acceptable

Project Introduction General Format: The general format given in Annex III, which shall be used as the basis for the preparation of the report that will introduce the project in Annex 1 with its general dimensions, including its characteristics, location, potential impacts and the recommended mitigation measures,

Specific Format for EIA Report: To be taken basic in the preparation of Environmental Impact Assessment Report; a format describing the subjects, which are required to be handled under the main headings, as shown in the project introduction general format in Annex-III, in consideration of important environmental dimensions of a project by the Scoping and review committee.

Environmental Impact Assessment Report: A report to be prepared according to the special format, for a project included in Annex-I or whose decision that “Environmental Impact Assessment is required” is made by the Ministry.

Project Introduction File: A file, which is prepared to determine whether Environmental Impact Assessment is required for those projects included in the list of Annex-II.

Election -Selection Criteria: The criteria in Annex-IV, which will be taken basic for the preparation of a project introduction file.

Decision That Environmental Impact Assessment is Negative: A decision made by the Ministry, which objects to the realization of a project due to its negative Impacts on environment, considering the evaluations by the Scoping and review committee of Environmental Impact Assessment Report.

Decision that Environmental Impact Assessment is not required:

A decision made by the Ministry, stating that the environmental Impacts of those projects listed in Annex-II are not important and that an Environmental Impact Assessment Report is not required to be prepared.

Environmental State Evaluation Report: A technical report, which is prepared to ensure that the required environmental measures are taken for those existing activities, which have been put into operation without observing the relevant provisions of the Environmental Impact Assessment Regulations.

Sensitive Areas: Those areas, which are sensitive to environmental Impacts with their biological, physical, economical, social and cultural qualities or those whose existing pollution loads are determined to have reached to a level, which may damage environmental and public health and those which are required to be protected under the regulations of our country and international conventions to which we are a party, as listed in Annex-V.

Environmental Impact Assessment Positive Decision: A decision made by the Ministry, which does not object to the realization of a project, upon determining that the negative Impacts of a project are at acceptable levels under relevant regulations and scientific principles, as a result of the measures to be taken, considering the evaluations by the Scoping and review committee of Environmental Impact Assessment Report.

Committee: The Scoping and review committee, founded by the Ministry in order to determine the scope and criteria of the special format to be submitted for a project and to examine and evaluate the Environmental Impact Assessment Report, prepared in compliance with such principles.

Developer: Any real or legal person who undertakes the execution of a project, which is subject to this regulation, at every stage.

Monitoring and auditing EIA Follow Up: The entire work, which is done to carry out a project, which is put into application stage, after a decision that “Environmental Impact Assessment is not required or after “Environmental Impact Assessment Positive Decision”, in accordance to the principles, which are basic for making such a decision and in a manner not influencing environmental values negatively.

Scope and Special Format Determination Meeting: A meeting to be held after the Public Participation Meeting, for the projects, which are subject to Environmental Impact Assessment Process.

SECTION TWO

General Provisions

Authorization

Article 5. The Ministry is authorized to make the decisions that “Environmental Impact Assessment is positive”, “Environmental Impact Assessment is negative”, “Environmental Impact Assessment is required”,

“Environmental Impact Assessment is not required”, related with the projects subject to those regulations. However, the Ministry may, in cases of necessity, transfer its power to make the decisions that “Environmental Impact Assessment required” or “Environmental Impact Assessment is not required” to the Governors, by determining limits.

Responsibility to Prepare Environmental Impact Assessment Reports or Project Introduction Files

Article 6. Real and legal persons who plan to realize a project, which is subject to this regulation, are obliged to prepare an Environmental Impact Assessment Report for the projects which are subject to Environmental Impact Assessment and a project introduction file for the projects which are subject to Annex II; to submit the same to relevant authorities and to realize them according to the decision made.

Public institutions and organizations are obliged to provide all sorts of information, documentation and opinions, which may be requested by developers during the process of executing the provisions of this regulation.

For the projects, which are subject to this regulation, unless a decision is made that “Environmental Impact Assessment is positive” or “Environmental Impact Assessment is not required”, any incentive, approval (including landscape plan modification approvals), permission, building and use license shall not be given, nor the investment in the project shall be started.

SECTION THREE

Environmental Impact Assessment and Implementation Procedures

Projects Subject to Environmental Impact Assessment

Article 7. It is mandatory to prepare an Environmental Impact Assessment Report for the following projects, which are subject to this regulation:

- a) Those, which are listed in Annex-I,
- b) Those, which are listed in Annex-II and a decision that “Environmental Impact Assessment is required” is made.

Starting Environmental Impact Assessment Process and Establishment of the Committee

Article 8. The owner of project shall apply to the Ministry with a file prepared based on the project introduction format shown in Annex-III and attached to the application.

The Ministry shall examine the information and documentation in the file of application for conformity. Those files, which may be found improper in respect of preparation, shall be returned to the owners in order to be completed. Such developers shall submit their files again to the Ministry after they have completed any lacks.

In case that the Ministry decides that a file is prepared properly, then the Ministry shall, considering the information in the application file, found a committee consisting of the authorized persons from the Ministry and the developer and/or his/her/its representatives. The Ministry shall request the developer to reproduce the application file as many as the number of the members of the committee. The procedures set forth in this paragraph shall be completed within three working days. For the projects, that are decided that “Environmental Impact Assessment is required”, the developer shall apply to the Ministry with such a decision and the project introduction file, attached to the application. Action shall be taken on such a file as an application file. The Ministry shall examine such a file and request the developer to reproduce the file as many as the number of the members of the committee, as determined by the Ministry.

The Ministry shall forward a copy of the application file to the members of the Committee, attached to a letter showing the date and place of the Public Participation Meeting and Scope Determination Meeting and inviting the committee to the first meeting. The representative of the Ministry shall preside the committee and secretarial services shall be carried out by the Ministry.

The Ministry may, if they find it necessary, invite representative from universities, institutes, research and expert organizations, professional chambers, trade unions, unions, non – government organizations as members as well, considering the subject and type of the project and the properties of the site selected for the project.

It is essential for the members representing their institutions and organizations to have sufficient knowledge and experience and to be authorized to submit opinions on behalf of the institutions and organizations which they represent.

PUBLIC PARTICIPATION MEETING

Article 9. Before the Scope determination meeting of the committee, a Public participation meeting shall be organized by the owner of the project, at the place where the project is planned to be realized, on a date to be determined by agreement with the Ministry, in order to inform people of the investment and to obtain their comments and recommendations. The owner of the project may conduct public survey. Seminar, etc, in order to inform people of the project, before Environmental Impact Assessment process.

- a) The place for a meeting shall be determined by the Governorship and the developer and shall be informed by the Governorship to the Ministry. Care shall be taken of selecting a central place for a meeting, easily accessible by the people in the locality, who are expected to be mostly influenced by the project.
- b) The owner of the project shall cause an announcement stating the date, time, place and subject of the meeting to be published in a national newspaper and in a local newspaper, at least three days before the date of the meeting.
- c) The meeting shall be presided by the Provincial Environment and Forest Director or a person to be assigned by him/her. In the meeting, it shall be ensured that people are informed of the project and their comments and recommendations are obtained. The chairman of the meeting may request attending people to give their comments and recommendations in writing. A copy of the minutes of the meeting shall be kept at the Governorship and a copy of it shall be forwarded to the Ministry.

The members of the committee may, on their own discretion, examine the site of the project, as stated in Article 8, before the Scope Determination Meeting and may attend the Public participation meeting, according to the date noticed them. Secretarial services for Public participation meetings shall be conducted by the provincial Environment and Forest Directorate.

Meeting of the Committee to Determine Scope and Special Format

Article 10. Public participation, informing, scope determination and special format delivery procedures shall be completed within 12 working days.

In the first meeting by the committee to determine scope and special format, the following activities shall be carried out:

- a) The owner of the project shall inform the committee of the project.
- b) The Ministry and/or provincial organization shall inform the committee of the Public participation meeting. In addition, the members of the committee who attend the Public participation meeting shall submit their comments and recommendations as well.
- c) The subjects, which are required to be handled under the main headings in the project introduction format, as listed in Annex-III, shall be detailed, considering important environmental Impacts of the project in order to determine the scope of the project and the scope shall be determined.
- d) The committee shall determine any additions or deletions, which are required to be added to or deleted from the format. Considering also the comments and recommendations from the Public participation meeting, the work group who would prepare the special format and Environmental Impact Assessment Report shall be determined.
- e) The Ministry shall deliver the special format determined by the committee to the developer and/or his/her/its representative within the period of time as determined in this Article.

The developers shall submit an Environmental Impact Assessment Report to the Ministry within one year from the date when the special format is delivered to the developer. In case that an Environmental Impact Assessment Report is not submitted or extension of the term is not requested for with grounds, the application shall become invalid. In case that the Ministry approves a request for extension of the term, an additional time of maximum six months shall be awarded.

Submitting an Environmental Impact Assessment Report to the Ministry

Article 11. An Environmental Impact Assessment Report shall be submitted to the Ministry by the owner of the project, annexed to an application. The Ministry shall finalize a review to determine whether such an Environmental Impact Assessment Report conforms to the special format and whether it is prepared by professional experts, which are required to be included in the determined work group, within three working days. If it proves that such an Environmental Impact Assessment Report has not been prepared in compliance with the special format and/or by the determined work group, the report shall be returned to the developer to ensure that such requirements are fulfilled. In case that a corrected Environmental Impact Assessment report is not submitted to the Ministry within three months, the application shall be deemed to be invalid.

An Environmental Impact Assessment Report, which is determined to be in compliance with the special format shall be reproduced as many as required and then shall be submitted to the Ministry. The Ministry shall forward such an Environmental Impact Assessment Report to the members of the committee, annexed to a letter, which determines the date and place of the meeting to be held to examine and evaluate the report.

The Ministry and the Governorship shall make a public announcement by suitable means that the project – related review and evaluation process has started and its Environmental Impacts Evaluation Report has been opened to Public comments and recommendations.

Those who are willing to examine such an Environmental Impact Assessment Report may review the report at the headquarters of the Ministry or at Provincial Environment and Forest Directorates from the date of such an announcement and they may submit their opinions to the Ministry or to the Governorship. Any opinions, which may be submitted to the Governorship, shall be transmitted to the Ministry. Such opinions shall be taken into consideration by the committee, except for those opinions, which are submitted after the end of review process.

Working Method of the Committee and Review of Environmental Impact Assessment Report

Article 12. The committee shall examine and Evaluate Environmental Impact Assessment Report within ten working days after the first review meeting.

The quorum for the committee to meet is absolute majority of the members. The members of the committee shall be appointed in accordance with their powers, duties and responsibilities in the matters related with central and local institutions and organizations which they represent and they shall submit opinions on behalf of their institutions and organizations. The chairman of the committee may request the members to submit their opinions in writing. The chairman of the committee may evaluate any requests by any representatives, who submit their opinions in writing, not to attend subsequent meetings.

The committee may request the developer to give comprehensive information about his/her/its project, to provide means and tools, to make acceptable organizations conduct analyses, tests and measurements.

The committee may apply to witness samples in case of disputes in water, soil, etc analyses and may obtain opinions from authorized expert institutions and organizations. The expenses for such procedures shall be paid by the developer. The committee may, if they find it necessary, conduct surveys by means of its members to be tasked, at the site where the project is planned to be realized and at similar facilities.

In case that important deficiencies and mistakes are found in an Environmental Impact Assessment Report, the committee shall request the developer or the relevant institutions to remedy such deficiencies and mistakes. In such a case, the committee shall stop review works. The committee shall not continue to work unless such deficiencies are completed or such mistakes are corrected.

After the developers makes the required corrections in the Environmental Impact Assessment Report and submits it again to the Ministry, the committee shall be invited to a meeting by the Ministry. Upon such a

meeting, the review process shall continue from the point where it has been stopped.

The developer may be requested to make changes in an Environmental Impact Assessment Report for twice as a maximum. In case the committee finds the correction made to be insufficient, then the situation shall be fixed by a minutes and the application shall be deemed to be invalid.

The committee shall examine and evaluate the followings during review meetings:

- a) Whether an Environmental Impact Assessment Report and its annexes are sufficient and proper,
- b) Whether reviews, calculations and evaluations are based on sufficient amount of data, information and documentation,
- c) Whether the Impacts of the project on environment are examined broadly,
- d) Whether the required measures are taken in order to eliminate adverse Impacts on environment,
- e) Whether Public participation meeting is held properly, whether sufficient solutions are brought to the matters stressed in Public participation meeting.

The committee shall finalize its works within the period of time as stated in the first paragraph above. Evaluations by the committee shall be fixed by a minutes signed by the members.

Submitting Final Environmental Impact Assessment Reports and Applicable Documents to the Ministry

Article 13. The developer shall submit the following documents to the Ministry within five working days from termination of review meetings:

- a) Final Environmental Impact Assessment Report, examined and finalized by the committee,
- b) A commitment letter stating that the final Environmental Impact Assessment Report and its annexes are committed and a notarized signature warrant. Public institutions and organizations are not required to submit a signature warrant.

In case that the documents stated in the first paragraph are not submitted in due time, without mentioning reason, such an Environmental Impact Assessment Report shall be deemed to be invalid.

Decision that Environmental Impact Assessment is Positive or Negative

Article 14. The Ministry shall, considering the works by the committee about the report, make a decision that “Environmental Impact Assessment is positive” or “Environmental Impact Assessment is negative”, on the project, within five working days. The Ministry shall forward such a decision in writing to the owner of the project and to relevant institutions and organizations. The governorship shall make a public announcement about such a decision by suitable means, directed to the people in the locality.

In case that investment is not started within five years for a project which has a decision that “Environmental Impact Assessment is positive” the decision that “Environmental Impact Assessment is positive” shall be deemed to be invalid.

For a project which has a decision that “Environmental Impact Assessment is negative”, the owner of the project may apply again, in case that all the conditions that had caused to make a decision that “Environmental

Impact Assessment is negative” have been changed.

SECTION FOUR

Screening Criteria Implementation Procedures

PROJECTS SUBJECT TO SCREENING CRITERIA

Article 15. The following projects shall be evaluated by the Ministry:

- a) Those projects listed in Annex II,
- b) Those projects, related with the changes requested to be made in existing states of the projects included in this regulation, both during investment and operation stages,
- c) Those projects, related with the changes requested to be made in existing states of the projects not included in this regulation, but which would result in including in this regulation,
- d) If the developer documents that those projects included in paragraphs (b) and (c) are requested to be modified by use of advanced technology.

Application and Review

Article 16. The developer shall submit an application requesting for determination whether the project requires an Environmental Impact Assessment, three project introduction files prepared in compliance with Annex-IV, a commitment letter stating that the information and documentation included in the project introduction file and its annexes are true and a signature warrant, all attached to the application, to our Ministry.

The Ministry shall examine the project file prepared for his project to determine whether it conforms to the criteria shown in Annex-IV, within five working days. In case of any deficiencies in information and documents, the developer shall be requested to complete them.

The Ministry may examine the project site in place or make it examine, in cases of necessity.

Decision that “Environmental Impact Assessment is required” or “Environmental Impact Assessment is not required”

Article 17. The Ministry shall examine and evaluate those projects included in paragraphs (a), (b) and (c) of Article 15, under the criteria set forth in Annex-IV. The Ministry may, if they find it necessary, request the developer to submit comprehensive information about the project, to provide means and tools, to make acceptable organizations conduct analyses, tests and measurements, at this stage.

The Ministry shall finalize review and evaluation process within fifteen working days and shall make a decision that “Environmental Impact Assessment is required” or that “Environmental Impact Assessment is not required” and then the Ministry shall inform the Governorship and the developer of such a decision. The Governorship shall inform the provincial organization and the people in the locality of the decision.

In case that investment is not started within five years for those projects which have a decision that “Environmental Impact Assessment is not required”, the decision that Environmental Impact Assessment is not required” shall be deemed to be invalid.

Those projects which have a decision that “Environmental Impact Assessment is required” shall be subject to Environmental Impact Assessment under Article 7. In case that Environmental Impact Assessment process is not started within one year under Article 8, the application shall be deemed to be invalid.

SECTION FIVE

Monitoring and Controlling

Monitoring and Controlling the Investment

Article 18. The Ministry shall monitor and control whether those matters planned in the Environmental Impact Assessment Report or in the project production file prepared according to Annex-IV and committed by the developer are fulfilled for the projects on which a decision that “Environmental Impact Assessment is positive” or a decision that “Environmental Impact Assessment is not required” is made. The ministry shall be in coordination with the relevant institutions and organizations, if they find it necessary, while carrying out such a duty.

After receiving a decision that “Environmental Impact Assessment is positive” or a decision that “Environmental Impact Assessment is not required”, the developer or his/her/its representative shall be obliged to deliver the permission and licenses obtained under applicable regulations and the monitoring reports related with the start, constructions, operation and after-operation periods of the investment. Such information shall be forwarded by the Ministry to the Governorship in order to inform people.

Stopping those Applications which are Contrary to the Regulations

Article 19. In the projects within the scope of this regulation:

- a) If it is determined that investment is started before a decision that “Environmental Impact Assessment is positive” or a decision that “Environmental Impact Assessment is not required” is made, the Governorship shall stop the investment. Such a decision on stopping the investment shall not be removed unless a decision that “Environmental Impact Assessment is positive” or a decision that “Environmental Impact Assessment is not required” is made.
- b) After a decision that “Environmental Impact Assessment is positive “or a decision that “Environmental Impact Assessment is not required “is made, if it is determined that the developer fails to conform to the Environmental Impact Assessment Report or to the commitments in the project introduction file, the Governorship may award time for once in order to fulfill the subject – matter commitments, if the Ministry approves it as well. In case that the commitments are not achieved at the end of this time, the investment shall be stopped. Such a decision on stopping the investment shall not be removed unless the commitments are fulfilled.

SECTION SIX

Various Provisions

EXTENSION AND STOP OF PERIODS OF TIME

Article 20. The periods stated in this regulation may be extended or stopped by the Ministry by stating ground, open request by the developer and approval by the Ministry or if the Ministry directly finds it necessary. Those periods of time awarded to the developer to remedy the deficiencies in the reports or to conduct additional procedures shall not be included in the Environmental Impact Assessment process.

CHANGE OF THE DEVELOPER

Article 21. In case that the developer changes for any reason, the new owner shall be deemed to have undertaken the commitments and Responsibilities of the former owner, without needing any further procedures and the new owner shall inform the Ministry of this situation by a letter.

SETTLEMENT OF DISPUTES

Article 22. In case of any disputes in the procedures stated in this regulation, the decision to be made by the Ministry shall be taken basic.

STRENGTHENING ENVIRONMENTAL IMPACT ASSESSMENT APPLICATIONS

Article 23. The Ministry may conduct any kind of training, plan, program and project work in coordination with native and foreign institutions and organizations related with Environmental Impact Assessment applications, in case of necessity, may prepare books, booklets, guides and all sorts of document, may organize seminars and meetings.

MILITARY PROJECTS

Article 24. The Ministry shall determine the Environmental Impact Assessment procedure to be applied in the following situations:

- a) Those projects which are planned to be realized again in sanction or in whole, in the regions where any destroyed, spoiled, ruined or damaged investment, due to natural disasters, is located,
- b) The provisions of the Environmental Impact Assessment Regulations may apply to those projects, which are not subject to the Environmental Impact Assessment Regulations or to those, which are listed in Annex-II, in order to obtain credit facilities or due to similar financial reasons, upon request by the developer and upon approval by the Ministry as well.
- c) Those projects, which are planned to be realized in organized Industrial Zones, Specialized organized Industrial Zones, Industrial Zones, Free Zones, Zones subject to Strategic Environmental Evaluation and Technology Development Zones.

Integral Projects

Article 26. In case that an integrated project, covering more than one project subject to this regulation is planned, the Ministry may request the developer to prepare one Environmental Impact Assessment Report for the integrated project.

QUALIFICATION CERTIFICATE

Article 27. Those institutions and organizations to prepare Environmental Impact Assessment Reports shall be obliged to a Qualification Certificate from the Ministry. The Ministry shall prepare a communiqué to regulate the procedures and principles related with awarding qualification certificates, controlling those institutions and organizations to which qualification certificates are awarded and canceling such qualification certificates.

COMMUNIQUÉS

Article 28. The Ministry may issue communiqués related with the application of this regulation, in case of necessity.

REGULATIONS REVOKED

Article 29. The Environmental Impact Assessment Regulations, published in the Official Gazette dated 06/06/2002 and numbered 24777 is revoked.

Temporary Article 1. The provisions of this regulation shall apply to those activities, which are subject to the provisions of the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 07/02/1993, numbered 21489; the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 23/06/1997, numbered 23028; the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 06/06/2002, numbered 24777, but, which fail to fulfill the Responsibilities set forth in the mentioned regulations.

Temporary Article 2. For those activities whose Environmental Impact Assessment Preliminary Research Reports have been prepared and submitted to the Ministry or to the Governorship before this regulation come into force, the provisions of those regulations to which such activities are subject shall apply.

Temporary Article 3. For those activities whose application projects have been approved or whose permission, licenses or approvals or expropriation decisions have been obtained under environmental regulations or other applicable regulations from the authorities having jurisdiction or which have been included in the investment program or whose local construction plans have been approved before the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 07/02/1993, numbered 21489 and for those activities, which are documented that they have started to production and/or operation before that date, the provisions of this regulation shall not apply.

Temporary Article 4. For those petroleum and gas pipelines, energy transmission lines, highways, double roads, express roads, railroads, state roads and provincial roads projects, whose routes have been determined under applicable regulations or which have been included in the investment program, before the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 23/06/1997, numbered 23028, the provisions of this regulation shall not apply.

Temporary Article 5. Those institutions and organizations to prepare Environmental Impact Assessment Reports shall not be required to have a qualification certificate, before the regulations on qualification certificates is published. However, the project introduction file should be prepared and signed by such persons

who have at least a bachelor's degree from at least three different profession groups, related with the type and site of the activity and Environmental Impact Assessment Reports should be prepared and signed by a work group determined by the committee.

Temporary Article 6. Those existing active facilities, which are subject to the provisions of the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 23/06/1997, numbered 23028; the Environmental Impact Assessment Regulations, published in the Official Gazette, dated 06/06/2002, numbered 24777, before the present regulations come into force, but, which have not completed necessary procedures although their site selections are suitable under applicable regulations, shall submit an Environmental State Evaluation Report to the Ministry in order to fulfill their Responsibilities under applicable regulations, and such a report shall be evaluated by the Ministry.

COMING INTO FORCE

Article 30. This regulation shall come into force on the date of publication.

EDUCATION

Article 31. The Minister of Environment and Forest shall execute the provisions of this regulation.

ANNEX – I

LIST OF PROJECTS SUBJECT TO ENVIRONMENTAL IMPACT ASSESSMENT

1. Refineries
 - a) Crude-oil refineries,
 - b) Gasification and liquefaction projects of coal and bituminous substances, above 500 tons/day,
 - c) Natural gas liquefaction and gasification facilities,
2. Thermal Power Stations
 - a) Thermal power stations having a thermal power of 200 MWt (Megawatt thermal) and above and other combustion systems,
Nuclear power stations and other nuclear reactors including the dismantling or decommissioning of such power stations or reactors (except research projects whose maximum power does not exceed 1 kilowatt continuous thermal load, intended for production and conversing of fissionable and fertile materials,
3. Nuclear fuel with radiation
 - a) Reprocessing of irradiated nuclear fuel,
 - b) Producing or enrichment of nuclear fuel,
 - c) Processing of irradiated nuclear fuel or high level radioactive waste ,
 - d) Final disposal of nuclear fuel with radiation,
 - e) Solely for the Final disposal of radioactive waste,
 - f) Solely for the storage (planned for more than 10 years) of irradiated nuclear fuels or and radioactive waste in a different site than the production area.

4. Facilities for smelting iron and steel
 - a) Facilities which produce rolled products from ores,
 - b) Facilities which produce liquid steel based on junk (100.000 tons/year and above),
 - c) Haddehane (100.000 tons/year and above),
 - d) Casting facilities (100.000 tons/year and above),
5. Facilities where non ferrous metals are melted (50.000 tons/year and above)
6. Projects of extracting asbestos and processing or transformation those products containing asbestos
 - a) Asbestos mine exploitation and concentration facilities,
 - b) Those facilities whose final products are asbestos concrete, with a capacity of 10.000 tons/year and above,
 - c) Those facilities whose final products are friction substances, with a capacity of 50.000 tons/year and above,
 - d) Other facilities which use asbestos of 200 tons/year and above,
7. Chemical installations for the manufacture on an industrial scale by use of various units which are functionally connected one another
 - a) Production of organic chemicals,
 - b) Production of inorganic chemicals,
 - c) Production of simple or composed fertilizer based on phosphorous, nitrogen and potassium
8. Roads, passages and airports
 - a) Domestic railroad lines,
 - b) Airports having a runway length of 2100 m and above,
 - c) Construction of motorways, express roads and state roads.
9. Waterways, harbors and shipyards
 - a) Construction of inland waterways which permit passage of vessels of over 1350 DWT and harbors to be constructed for inland water traffic,
 - b) Trading ports, harbors, and quays which allow vessels weighing 1350 DWT and above to dock
 - c) Shipyards for making, maintaining, repairing the passenger and cargo ships ,
 - d) Ship dismantlement activities,
 - e) Marinas
10. Waste disposal installations to recycle, to store temporarily and/or to dispose finally of dangerous and specially treated waste, as follows:
 - a) Incineration facilities, planned for medical waste, with an incineration capacity of 1000 kg/day and above,
 - b) Storage facilities for medical waste 1 ton/day and above capacity,
 - c) Those facilities, which are planned to recycle waste oil with a process capacity of 2000 tons/year and above,
 - d) Temporary storage facilities with a capacity of 1000 kg/day,

11. Those facilities which are established to treat solid waste with intermediate processes such as incineration, compost and other techniques and to dispose of them and / or solid waste storage facilities with an area bigger than 10 hectares or with a waste amount of 100 ton / day and above to be stored including the target year.
12. Projects to extract underground water of 10 million cubic meters/year above and to store such water underground.
13. Large water conduction projects except for pipeline drinking water conduction
 - a) Water transfer projects between river basins to convey 100 million cubic mete/year and above to prevent water shortage,
 - b) Water transfer projects other than those in paragraph (a), to convey 5% and above of a river basin with a flow rate of 2 billion cubic meter and above on average annually, for a long-term
14. Water storage facilities (dams with a water volume of 100 million cubic meter and above or with a water area of 15 square kilometer)
15. Meat integrated facilities
Those facilities, which are planned to include at least two of fattening, rendering and meat production units in addition to the facilities where cattle, sheep/goats and winged animals are slaughtered
16. Facilities where poultry and swine are raised, with capacities as follows:
 - a) Chicken and broiler raising facilities (chicken of 60.000 and above; broiler of 85.000 and above or equivalent winged animals) in one production period.
 - b) Pig production farms (3000 and above weighing 30 kg and above),
 - c) Female Pig reproduction farms (900 and above)
 - d) Culture fishery projects (1000 ton/year and above)
 - e) Integrated oil production projects (facilities where raw oil production and refining process from vegetable products are conducted together),
 - f) Integrated dairy production facilities (facilities where at least two dairy such as cheese, butter, yogurt are produced from milk, with a capacity of 50 ton/day),
17. Forest products and cellulose facilities
 - a) Cellulose production or process facilities, celluloid production or process facilities,
 - b) Facilities where paper pulp is produced from timber or similar fibrous substances,
 - c) All sorts of facilities where paper, cardboard, pasteboard are produced with a capacity of 200 ton/day and above,
18. Yarn, fabric or carpet factories which include bleach (desiring, bleaching, mercerizing, caustic sing, etc) and dye units together
19. Engine and motor vehicles
 - a) Production of motor vehicles,
 - b) Production of internal – combustion engine,
20. Production of railroad vehicles.

21. Manufacture and repair facilities for aircraft,
22. Glass or fiberglass production facilities (100,000 ton/year and above).
23. Raw skin dressing facilities (except for those which produce final products from dressed raw skin) with a capacity of 500 ton/year and above,
24. Tire production facilities (tubes and tires for motor vehicles, aircraft tires, column, backing) (rubber, cord fabric etc)
25. Mining projects, regardless of license law and stage
 - a) Outdoor exploitation and ore preparation facilities with an area of 25 hectares and above (total excavation and piling area),
 - b) Coal exploitation and ore preparation facilities with an outdoor operation method in a working area above 150 hectares (total excavation and piling area),
 - c) Ore enrichment facilities where biological, chemical, electrolytic or thermal process methods are used
26. According to stone quarry regulations,
 - a) Extraction of raw materials in an area of 25 hectares and above,
 - b) Treatment of extracted raw materials in every respect with a capacity of 100,000 cubic meter/year and above.
27. Cement factories and clinker production facilities
28. Electricity transmission facilities at 154kV (kilo volt) and above, longer than 15 km (transmission line, transformer station, breaker areas).
29. Production of raw petroleum of 500 ton/day and natural gas of 500,000 cubic meter/day.
30. Conveyance of petroleum, natural gas and chemicals through pipelines with a diameter of 600 mm and above and longer than 40 km
31. Petroleum, natural gas, petrol-chemicals and chemicals storage facilities with a capacity of 5000 cubic meter and above
32. Facilities where explosive and flammable substances are produced
33. River-type power stations with an established power of 50 MW and above
34. Facilities where reagents for agricultural insecticide and/or pharmaceuticals products are produced
35. Battery and accumulator production facilities
36. Sugar factories
37. Collectively projected houses (1000 houses and above)
38. Tourism accommodation facilities (500 rooms and above), holiday villages and tourism complexes
39. Ski areas and mechanical facilities (with a cableway of 1000 M and above)
40. Specialized Industrial Zones (activities listed in Annex-I and Annex-II)

ANNEX-II

LIST OF PROJECTS SUBJECT TO ELECTION-ELIMINATION CRITERIA

(The lower limits in the list in Annex I shall be regarded as an upper limit in this list.)

CHEMISTRY, PETROCHEMICALS, PHARMACEUTICALS AND WASTES

1. a) **Facilities** projected to produce chemicals, to produce **lubricants** from petroleum or **for processing intermediary products**,

- b) Facilities projected to recycle waste oil,
 - c) Medical waste incineration facilities with a capacity of 200-1000 kg/day, storage facilities with a medical waste order with a storage capacity less than 1 ton/day and those facilities intended for intermediate processing of medical waste physically and chemically,
 - d) Intermediate storage facilities for dangerous and specially treated waste, with a storage capacity of 150-1000 kg
 - e) Waste dams, waste pools,
- 2. Natural gas, petrol-chemistry, petroleum and chemical product stores with a total storage capacity of 500-5000 cubic meter (retail sales stations are excluded).
- 3. Storage facilities for explosive and flammable substances with a total storage capacity of 500 ton and above.
- 4. Facilities where agricultural insecticides and pharmaceutical products, paints and polishes, elastomer-based products and peroxides are produced or elastomer-based products are processed.
- 5. Facilities established to incinerate, compost, store solid waste and transfer stations.
- 6. Deep sea discharge projects.
- 7. Waste water purification facilities for settlement units with a population of 50.000 and above, and waste water purification facilities for Specialized and Organized Industrial Zones with an employment capacity of 20.000 and above.
- 8. Facilities where soap and detergent are produced
- 9. Facilities intended for recycling and disposing of fertilizer from coops and barns.

Metallurgy, machine manufacture and textile

- 10. Iron-steel and other metal facilities (except for those with a capacity of 1000 ton/year and below, and workshop-type works)
 - a) Facilities where iron-steel is melted and produced,
 - b) Rolling mills,
 - c) Casting factories,
 - d) Pipe production facilities,
 - e) Metal plating facilities,
 - f) Facilities where non-iron metals are melted,
- 11. Textile Facilities
 - a) Dyeing Facilities (by use of chemical or root dye) or yarn, fabric or carpet factories where breaching process is carried out,
 - b) Industrial-type Facilities where wool and mohair are rubbed, degreased or bleached,
 - c) Denim washing facilities,
- 12. Facilities where glass and fiberglass are produced.
- 13. Raw skin dressing facilities (except for those where final products are produced from dressed raw skin).
- 14. Facilities where all kinds of paper, pasteboard and cardboard are produced.

15. Rubber coating facilities with a capacity of 100.000 / year and above.

Agriculture, forest, aquiculture and food

16. Projects related with animal and vegetable products.
- a) Facilities where vegetable raw oil or refined oil are produced,
 - b) Facilities where animal fat are produced,
 - c) Facilities where starch is produced,
 - d) Facilities where alcoholic drink is produced by means of fermentation or malt facilities,
 - e) Water food processing facilities,
 - f) Milk processing facilities (with a capacity of 5 ton / day – 50 ton / day),
 - g) Animal slaughtering facilities subject to 1st or 2nd class licenses, under the Regulations on Establishing, Opening, Operating and Inspection Methods and Principles of Red Meat and Meat Products Production Facilities, published in the official Gazette dated 11.09.2000 and numbered 24167,
 - h) Rendering facilities,
 - i) Facilities where winged animals are slaughtered, with a capacity of 10.000 / day and above.
 - j) Cattle and sheep/goats fattening facilities (with a capacity of 500 cattle and above, 1000 sheep/goats and above),
 - k) Culture fishery projects (30-1000 ton/year),
 - l) Cigarette factories
 - m) Projects related with restructuring agricultural land,
 - n) Projects intended for using uncultivated or semi-cultivated areas for agriculture-concentrated purposes
 - o) Water management projects with a purpose of agriculture (100 hectares and above),
 - p) Projects intended for transforming forest areas into other purposes of use,
 - q) Ferment factories,
17. Facilities where poultry and swine are raised with the following capacities.
18. Facilities where chicken or broiler are raised (with a capacity of 20.000-60.000 chicken, 30.000-85.000 broilers or equivalent winged animals in one production period),
19. Swine fattening farms (1000-3000 swine's with 30 kg and above),
20. Female swine reproduction farms (300-900 swines).

Transportation, infrastructure and shore structures

21. Infrastructure facilities
- a) Water storage facilities (with a water volume of 10 million cubic meter and above or with a water area of 1 square kilometer or above),
 - b) Water conveyance projects between stream basins (Those not listed in Annex-I),
 - c) Construction of inland waterways (Those not listed in Annex-I),
 - d) Arrangement of stream beds to prevent flood or for other purposes,
 - e) Harbors, ports, quays (those not listed in Annex-I),

- f) Fisherman shelters, tugboat shelters,
- g) Projects intended for obtaining an area of 10.000 square meter and above at sea,
- h) Works on shores to prevent erosion and works on shores which cause changes on shore; breakwater, spur, mole, etc (except for maintenance and repair works),
- i) Railroad lines (those not listed in Annex-I),
- j) Construction of transfer-purpose facilities used in railroad transportation, railroad terminals,
- k) Streetcars, lifted and underground railroads, similar lines used to transport passengers (subway, light-rail transport systems, etc.),
- l) Airports (those not listed in Annex-I),
- m) Domestic roads,
- n) Enlargement of two or more lane roads into four or more lanes, with a continuous length of 10 km,
- o) Slip places (those facilities offering services such as pulling yachts and boats onto land, maintenance, repair, accommodation, launch and/or boat manufacture facilities),
- p) Projects intended for extracting underground water or underground storage with a capacity of 1 million cubic meter/year and above,
- q) Bottom dredging projects.

Energy

- 22. River type power stations with an established power of 10 MW and above,
- 23. Wind power stations
- 24. Extracting geothermal sources and those power stations using geothermal power (with a thermal capacity of 5 MW (megawatt) and above.
- 25. Industrial facilities established to generate and/or convey electricity, gas, steam and hot water.
- 26. Electricity transmission lines with 154 kV and above

Tourism, sports house and training facilities

- 27. Collectively projected houses (200 houses and above).
- 28. Tourism accommodation facilities (hotels, holiday villages, tourism complexes, etc, with 50 rooms and above),
- 29. Training campuses.
- 30. Permanent camp and caravan sites with an area of 50.000 square meters and above.
- 31. Recreation parks (parks constructed over large areas, where people enter by paying money to have a good time).
- 32. Skiing areas and their mechanical facilities.
- 33. Permanent race and test fields for cars and motorcycles.
- 34. Sport complexes and hippodromes.

Mining

- 35. Mining projects : regardless of license law and stage :
 - a) Extracting minerals (those not listed in Annex-I),

- b) Extracting and processing marble and decoration-purpose stones in block and in piece with a capacity of 5000 cubic meter/year and above and marble cutting, processing and polishing facilities with a capacity of 100.000 square meter/year and above,
 - c) Extraction and storage of methane with a capacity of 1.000.000 cubic meter/year and above,
 - d) Facilities where carbon dioxide and other gases are extracted and stored or processed with a capacity of 10.000 ton/year and above,
 - e) Extraction of raw materials under the stone quarry regulations (those not listed in Annex-I),
 - f) Processing any raw material in every respect, which is extracted under the stone quarry regulations with a capacity of 25.000 cubic meter/year and above,
 - g) Extraction of salt and/or all kinds of salt process facilities with a capacity of 50.000 ton/year and above,
 - h) Ore preparation and enrichment facilities (those not listed in Annex-I),
 - i) Searches conducted by boring with total 3000 m above in the same area
36. Clinker grinding facilities
37. Coal process facilities
- a) Air gas and coke plants,
 - b) Coal briquetting plants,
 - c) Coal washing plants.
38. Storage, classification and packaging facilities for petrol-coke, coal and other solid fuel (except for retail sales units).
39. Brick or tile production facilities (except for workshop-type facilities).
40. Ceramics and porcelain production facilities (except for workshop-type facilities).
41. Fixed asphalt preparation facilities
42. Lime production facilities.
43. Those products listed in Annex-I, but prepared to try and develop a new lasting maximum for two years.

ANNEX – III

PROJECT INTRODUCTION GENERAL FORMAT

Heading Page :

Name, address, phone No and fax No. of the developer:

Name of the project:

Name and location of site selected for the project:

Name, address, Phone and fax Number of the work group / organization, prepared the export:

List of contents:

Section I: Description and Objective of the Project:

Description, life, service purposes, importance and necessity of the project. Description of physical properties of the project, amount of land and land to be used in construction and operation stages.

Explanation in general of important environmental Impacts which may be arisen from the proposed project (water, air, soil pollution, noise, vibration, light, heat, radiation, etc.)

A summary of main alternatives, researched by the investor and statement of selection reasons for the site selected.

Section II: Location of the site selected for the project:

Location, coordinates and other introductory information about the project site and alternative areas.

Section III: Existing environmental properties of the project site and Impact area

For the environment, which may be polluted due to the proposed project : Explanation of population, fauna, Flora, geological and hydro geological qualities, natural disaster situation, soil, water, air (atmospheric conditions), climatic factors, proprietary status, architectural and archeological heritage, landscape qualities, land usage status, sensitivity degree (considering the list of sensitive areas in Annex – V) and including the relations between the above – written factors.

Section IV: Important environmental Impacts of the project and measures to be taken

1. Introduction of the Impacts which may be caused by the following matters (this introduction should include short – term, medium – term, long – term, permanent, temporary, positive and negative Impacts).
 - a) The area to be used for the project,
 - b) Use of natural resources,
 - c) Amount of pollutants (interaction between atmospheric conditions and pollutants), explanation of probable problems, which may bother the environment and minimization of waste.
2. General definition of estimation methods to be used in evaluating the Impacts by the investment on the environment.
3. Definition of the measures planned to be taken to minimize the negative Impacts by the project on the environment.

Section V: Public participation

1. Methods proposed to determine the people that may be influenced by the project and to reflect Public opinions onto the EEE study,
2. Other parties, whose opinions are planned to be obtained,
3. Other information and documentation, which may be submitted in this matter.

Section VI: A Non – technical summary of the information provided under the above – written headings

Annexes: Information and documentation used in the preparation of the Project Introduction Report and obtained from various organizations and the following documents used in the report, but not submitted in the text of the report:

1. Environmental order, arranging, application development plan, situation plan or plan modification proposals of the site and its alternatives, if any, selected for the project,
2. Previously obtained permission, approval, license or documents obtained from relevant organizations for the project,
3. Land usage status of the area selected for the project.

Notes and references

Introduction of the work group who prepares the project introduction report: Names, professions, biographies, references and signatures showing responsibility for the report.

The project introduction report should be prepared by a work group consisting of at least 3 persons from the relevant professional branches, considering the type and site of the project.

ANNEX – IV SCREENING CRITERIA TO BE TAKEN BASIC FOR THE PREPARATION OF THE PROJECT INTRODUCTION FILE

Heading Page:

Name, address, phone and fax numbers of the developer:

Name of the project:

Name and location of the site selected for the project:

Description and Objective of the project:

Name, address, phone and fax numbers of the work group / organization that prepared the file:

Date of preparation of the file:

1. Properties of the Project :

The following matters should be taken into consideration in describing the properties of the project:

- a) Work flow diagram, capacity, covered area, technology, number of personnel to be employed for the project,
- b) Use of natural resources (land use, water use, type of energy used, etc)
- c) Amount of waste production (solid, liquid, gas) and chemical, physical and biological properties of waste,
- d) Risk of accident, which may be arisen from the technology and materials used,
- e) Measures to be taken against possible environmental Impacts by the project.

2. Site of the project

The following factors should be taken into consideration when evaluating the sensitivity of the area which may be influenced by the project:

- a) Existing land use and its quality (agricultural area, forest area, planned area, water surface, etc)
- b) Taking the list of sensitive areas in Annex – V into consideration; wetlands; coastal areas; mountainous and woody areas; agricultural areas; national park; special protection areas; densely populated areas; historical, cultural, archeological etc areas; erosion areas; landslide areas; afforested areas, potential erosion and forestation areas; aquiferrics, which are required to be protected under Underground Waters Code numbered 167.

3. Alternatives to the project and site (reasons for selecting the technology and the site of the project)

Conclusions

A summary of all the explanations shall be given, important environmental Impacts, which may be caused by the project, shall be listed and a general evaluation shall be made with comparing the alternatives one another.

ANNEXES

Environmental order, arranging, application development plan, situation plan or plan modifications of the selected for the project, if any.

For evaluating the existing use of land of the project site and its vicinity; those data about settlement areas, transportation networks, electricity transmission lines, existing facilities and other areas as listed in Annex – V Sensitive Areas (in case that they are located at the project site and its vicinity) will be shown on a 1/25000 scale map (on an environmental order plan, if any, or if not, on a topographic map) with short explanations.

A scaled geological map of the project site, showing underground and surface waters on such a map and explanation of seismic situation of the area.

Notes and references

Introduction of the work group who prepared the Project Introduction File. Names, professions, biographies, references and signatures showing responsibility for the file.

ANNEX – V SENSITIVE AREAS

The regulations, required to be applied to during the works and studies related with the projects, which are included in the present regulations are listed below. Any changes in such regulations shall be an integrated section of this section.

1. Areas, which are required to be protected under the regulations of our country

- a) “National Parks”, “Natural Parks”, “Natural Monuments” and “Nature Preserves”, as defined by Article 2 of national Parks Code numbered 2873 and as determined by Article 3 of the same Code.
- b) “Wildlife Protection Areas and Wild Animals Accommodation Areas” determined by the Ministry of Forest under the Land Hunting Code numbered 3167.
- c) Those areas, defined as “Cultural Assets”, “National Assets”, “Site” and “Protection Area” in subparagraphs 1, 2, 3 and 5 of paragraph a-Definitions of Article 2 of Cultural and Natural Assets Protection Code numbered 2863 and those areas, determined and registered under the relevant articles of the same Code and the code numbered 3386 (code to change same articles of the Cultural and Natural Assets Protection Code numbered 2863 and to amend some articles to the same Code)
- d) Water Food Production and Reproduction Areas within the scope of Water Food Code numbered 380
- e) Those areas, as defined in Article 17 of Water Pollution Control Regulations, published in the Official Gazette, dated 4/9/1998, numbered 19919 and in Articles 18, 19 and 20 of the same regulations as amended by the Regulations, published in the Official Gazette, dated 1/7/1999, numbered 23742.

- f) “Sensitive Pollution Areas”, as defined in article 49 of Air Quality Protection Regulations, published in the Official Gazette, dated 2/11/1986, numbered 19269.
- g) Those areas, determined and declared by the Council of Ministers, as “Special Environment Protection Areas”, under article 9 of the Code of Environment, numbered 2872.
- h) Those areas, which are protected under the Bosphorus Code, numbered 2960.
- i) Those areas, which are deemed to be forest areas, under the Code of Forest, numbered 6831.
- j) Those areas, where building is prohibited, under the Code of Shore, numbered 3621.
- k) Those areas, defined in the Code on Breeding Olive Trees and Grafting Wild Olive Trees, numbered 3573.
- l) Those areas, defined in the Code of Pasture, numbered 4342.
- m) Those areas, defined in the Wetland Protection Regulations, published in the Official Gazette, dated 30.01.2002, numbered 24656.

Areas, which are required to be protected under the international conventions to which our country is a party

- a) Projection Areas I and II, as defined in “Important Sea Turtles Reproduction Areas”, “Mediterranean Seals Living and Reproduction Areas”, under the “European Wildlife and Living Environment Protection Convention” (Bern Convention), published in the Official Gazette, dated 20/2/1984, numbered 18318 and which came into force.
- b) Those areas, which are protected under the “Convention to Protect Mediterranean Against Pollution” (Barcelona Convention), which came into force upon publishing in the Official Gazette, dated 12/6/1981, numbered 17368.
- I) Those areas, determined as “Special Protection Areas” in our country, under the “Protocol to Protect Special Protection Areas in Mediterranean”, published in the Official Gazette, dated 23/10/1988, numbered 19968.
- II) Those areas, included in the list of “100 Coastal Historical Sites Having Common Importance in Mediterranean”, selected under the Genoa Declaration, dated 13/9/1985, published by the United Nations Environment Protection Program.
- III) Coastal areas where “Sea species, peculiar to Mediterranean, whose generations are endangered” live and grow, as defined in article 17 of Genoa Declaration.
- c) Cultural, historical and natural areas, placed under protection and given a status of “Cultural Heritage” and “Natural Heritage” by the Ministry of Culture, under articles 1 and 2 of “World Cultural and Natural Heritage Protection Convention”, which came into force upon publishing in the Official Gazette, dated 14/2/1983, numbered 17959.
- d) Those areas, protected under the “Convention to protect wetland having international importance especially as living environment for water birds”, which came into force upon publishing in the Official Gazette, dated 17/05/1994, numbered 21937.

3. Areas, which are required to be protected

- a) Those areas, whose existing properties are determined to be protected and where building is prohibited, in approved environmental order plans (biogenetic reserve areas, geothermal areas, etc, whose natural qualities should be protected),

- b) Agricultural areas : All agricultural development areas, irrigated, irrigatable areas with a land use capability class of I, II, III and IV, areas of class I and II used in agriculture depending on precipitation and special crop plantation areas,
- c) Wetlands: all waters, swamp rushy and peat bog areas and those places, which are ecologically wetland toward land from the shore edge line of such areas, natural or artificial, permanent or temporary, whose water is calm or with a current, covering maximum depth of 6 meter during the ebb of tides of sea, which are important as living environment for living beings, especially for water bird.
- d) Lakes, streams, underground water exploitation areas.
- e) Areas, which are important for scientific research and/or where those species, whose generations are endangered live and where those species that are endemic for our country live, biosphere reserves, biotopes, biogenetic reserve areas, those areas where geological and geomorphologic formations with unique qualities are located.

Laws

Law on Metropolitan Municipalities

Law No. 5216

SECTION ONE

Purpose, Scope and Definitions

Purpose

Article 1 – The purpose of the present Law is to regulate the legal status of the metropolitan municipalities and to ensure planned, programmed, effective, efficient and harmonized execution of services.

Scope

Article 2 – The present Law covers the metropolitan municipalities and the municipalities within the borders of metropolis.

Definitions

Article 3 – In the implementation of the present Law;

- a) Metropolitan municipality is public legal personality that covers at least three district or first degree municipalities and fulfills the coordination amongst these municipalities and performs the duties and obligations given by the laws; exercises the authorities; and owns administrative and financial autonomy. Its decision making body is selected by the electors.
- b) Organs of metropolitan municipality are metropolitan municipal assembly, city council and mayor of metropolitan municipality.
- c) District municipality is the one which is within the borders of metropolitan municipality.
- d) First degree municipality is the one which is formed without establishing a district within the borders of metropolitan municipality. It has the same authority, privilege and responsibilities as the metropolitan district municipalities.

SECTION TWO

Establishment and Borders of Metropolitan Municipality

Establishment

Article 4 – A provincial municipality can be transformed into metropolitan municipality in line with its physical settlement and level of economic development, if the settlement units with a population of 750.000 according to the latest census are within or close to this municipality and if they are 10.000 meters away from it at most.

Borders of the metropolitan municipality

Article 5 – The borders of a metropolitan municipality are the municipality boundaries of the metropolis of which the name they earn.

The borders of the district municipalities are the boundaries of areas which are within the borders of the metropolitan municipality.

First degree municipalities cannot have municipal borders outside the metropolitan municipality boundaries.

Joining the metropolitan municipality

Article 6 – The provisions of the Law on Metropolitan Municipalities are applied for the municipalities and villages to join the metropolitan municipality, which are at the environs of the metropolitan municipality borders and which are within the borders of the same province. Upon the demand of the assemblies of the related district or first degree municipalities, the metropolitan municipal assembly decides on their joining.

In case the development set and major infrastructural services oblige, the municipalities and the villages mentioned in the first paragraph can be included into the borders of the metropolitan municipality upon the decision of the metropolitan municipal assembly and the proposal of the Ministry of Interior.

The district municipalities included into the borders of the metropolitan municipality and the municipalities with the population more than 50.000 and plus, are transformed into metropolitan district or first degree municipalities. The legal personality of the other municipalities and villages is repealed. The Council of Ministers determines the municipalities which the municipalities with repealed legal personality join and which the villages shall be tied to as quarters.

The municipalities which are included into the borders of the metropolitan municipality as district and first degree municipalities shall be represented by the members of assembly in the ratio of one fifth and one tenth, respectively according to the selection order of districts and first degree municipalities in the metropolitan municipal assembly. Fractions shall not be taken into consideration. This situation is valid until the first general local elections. The provisions of the first paragraph of Article 12 are applied for the mayors of these municipalities.

SECTION THREE

Duties, Authorities and Obligations of Metropolitan Municipality

Duties and obligations of the metropolitan, district and first degree municipalities

Article 7 – The duties and obligations of the metropolitan municipality are;

- a) to prepare the strategic plan, annual goals, investment programs and proper budgets for these items by receiving the avis of the district and first degree municipalities
- b) to make, approve and implement the master plans on development works or to have them done at every scale ranging from 1/5.000 to 1/25.000 within the borders of the metropolitan municipality and neighboring areas on condition that they are in convenience with environmental development plan; to exactly implement the application development plans and the changes to take place in these plans, parcelation works and rehabilitation development plans which shall be prepared by the municipalities within the metropolis in accordance with the master plan, or to approve them by making changes and to inspect their implementation; to prepare the application development plans and parcelation works of district and first degree municipalities that do not prepare the aforementioned plans, or to have them prepared, within one year as from the enforcement date of master plans on development works,
- c) to implement and license the development plans, parcelation works and every type of development works at every scale as to projects, constructions, repair and maintenance necessitated by the duties and services bestowed by the laws to the metropolitan municipalities; to exercise the authorities given in the Law on Shanty Towns, numbered 775, dated 20.7.1996,

- d) to license and inspect the business establishments in the areas constructed or operated by the metropolitan municipality, and the business establishments to be operated in the areas under the responsibility of the metropolitan municipality,
- e) to exercise the authorities mentioned in Article 68 and 72 of the Law on Municipalities,
- f) to prepare the metropolitan transportation master plan or to have it prepared, and to implement it; to plan and coordinate the transportation and public transportation services; to determine the number of any type of services and public transportation vehicles operated on highways, sea ways and railways, and the number of taxis, ticket fees and price lists, timetables and itineraries; to identify, to operate or lease the place of stations and parking lots on the highways, roads, main roads, streets, squares and similar places, or to get them operated; to execute all the works necessitated by the traffic regulation given by the laws to the municipalities,
- g) to construct squares, boulevards, streets and main roads within the jurisdiction of the metropolitan municipality or to have them constructed; to fulfill the repair and maintenance; to impose obligations concerning the buildings ranging with these places, in line with the urban design projects; to determine the place, shape and size of billboards for notices and adverts; to give name and number to the squares, boulevards, main road, streets; and to give number to the buildings on these places,
- h) to establish geographical and urban information systems,
- i) to protect the environment, agricultural lands and water basins in compliance with the sustainable development principle; to afforest; to identify excavation soil, rubble, gravel and pebble storage areas, wood and coal sale and storage areas; to take precautions to prevent the environmental pollution during the transportation of wood and coal; to prepare the metropolitan plan for solid waste management or to have it prepared; to fulfill services pertaining to the recycling, storage and disposal of the solid waste and excavation soil except for collection at source and transportation to transmission station; to establish and operate facilities with this purpose or to have them established or operated; to fulfill the services pertaining to industrial and medical waste; to establish and operate the facilities with this purpose or to have them established or operated; to collect the waste of naval vessels or to have it collected, to treat this waste and fulfill necessary regulations,
- j) to license and inspect first class unhygienic establishments including those related to catering; to establish and operate laboratories to analyze food and beverage,
- k) to fulfill the municipal police services on the responsibility area and the areas operated by the metropolitan municipality,
- l) to construct, operate or license the closed and open parking lots for passenger and freight terminals or to have them constructed or operated,
- m) to construct and operate social infrastructures, regional parks, zoos, animal shelters, libraries, museums, recreational and entertainment areas etc. which are serving the entire metropolis or to have them constructed or operated; to provide materials to the amateur sports clubs, if necessary and to provide necessary support; to organize sports contests amongst the amateur teams, to award the sportsmen who are

successful or who have a degree in national and international contests, with the decision of the metropolitan municipal assembly,

- n) to construct buildings or facilities for healthcare, educational and cultural services, if necessary; to fulfill all types of repair and maintenance works of buildings and facilities of public organizations relating to these services, and to provide materials,
- o) to ensure that the historical texture of cultural and natural assets, and important spaces of urban history and historical texture are protected; to fulfill repair and maintenance for that purpose; to reconstruct those which are impossible to protect according to truth,
- p) to execute the public transportation services within the metropolis and to establish and operate necessary facilities with that purpose or to have them established or operated; to license the public transportation vehicles and vessels on the land and in the sea within the borders of the metropolis including taxis and service vehicles,
- q) to execute water supply and sewerage services, to establish and operate necessary dams and other facilities or to have them established for that purpose; to rehabilitate the river basins, to market spring water or treated water,
- r) to identify cemetery areas, to establish and operate cemeteries or to have them operated, to execute the burial services,
- s) to construct and operate every type of wholesale halls or slaughterhouses or to have them constructed or operated, to license and inspect the private market halls and slaughterhouses to be constructed in the areas stipulated in the development plan,
- t) to fulfill the plans and other preparations at metropolitan scale concerning the natural disasters in concordance with the plans at provincial scale; to provide tools, equipments and materials to the other disaster areas, if necessary; to fulfill the fire brigade and emergency aid services; to identify the production and storage areas of explosives and flammables, to inspect the residences, business establishments, factories, industrial establishments and public organizations concerning the countermeasures of fire and other disasters, to give permits and licenses on this issue, that are necessitated by the legislation,
- u) to execute and develop all types of social and cultural services such as healthcare centers, hospitals, itinerant healthcare units for adults, elderly, disabled, women, youngsters and children, and to establish social facilities with this aim; to open and operate vocational and skill development courses or to have these courses operated, to cooperate with universities, collages, vocational high schools, public organizations and non-governmental organizations,
- v) to establish and operate central heating systems or to have these systems established or operated,
- w) to evacuate and demolish the buildings constituting danger of casualty and material loss or those having disaster risk,

The metropolitan municipalities have to exercise their authority mentioned in the first paragraph, (c) in accordance with development plans and they have to inform the related municipality. With the decision of the metropolitan

municipal assembly, the metropolitan municipality can delegate some of these duties to the district and first degree municipalities that they find appropriate, or they can fulfill them together.

The duties and obligations of district and first degree municipalities are;

- a) to fulfill the duties and exercise the authorities except for those particularly given to the metropolitan municipalities and those mentioned in the first paragraph,
- b) to collect solid waste and transport it to the transmission station in convenience with the metropolitan plan for solid waste management,
- c) to license and inspect hygiene business establishments, 2nd and 3rd class unhygienic establishments, public resting and entertainment places,
- d) Of the services mentioned in the first paragraph, to construct parking lots, sports centers resting and entertainment places and parks; to provide social and cultural services for elderly, disabled, women, youngsters and children; to open vocational and skill development courses; to construct, repair and maintain the healthcare, educational and cultural facilities and buildings, and to protect natural assets and historical texture; to provide services relating to the development of important spaces with respect to urban history, and their functions,
- e) to fulfill burial services.

The authorities and responsibilities given to the Ministry of Industry and Commerce and to the organized industrial zones by the Law on Organized Industrial Zones, numbered 4562 are out of the scope of this present Law.

Infrastructural services

Article 8 – In order to coordinate the infrastructural services within the metropolitan municipality, the coordination center for infrastructure shall be established under the presidency of the metropolitan mayor or somebody appointed by him, which the representatives of public bodies or organizations, and private organizations shall participate. These public and private organizations or bodies shall be identified by the regulation. The mayors of district and first degree municipalities shall participate in the coordination center as members in order to join the discussions of issues relating to their municipalities. Additionally, the representatives of professional organizations (organizations higher than chambers, if any) having public nature shall be invited to the meetings of the coordination center for infrastructure to receive their avis concerning the issues on the agenda which are related to them.

The coordination center for infrastructure shall combine and finalize the draft programs for the infrastructural investments to be materialized by public and private organizations within the metropolis in conformity with the development plan and annual plans. With this purpose, public and private organizations have to provide any type of information and document to be required by the coordination center for infrastructure including geographical information systems. In final programs, the requirements to be simultaneously fulfilled by more than one public organization shall be combined under the umbrella of a joint program. The allocations which are provided for the budgets of municipalities and all other public organizations for the infrastructural services under joint programs shall be transferred to infrastructural investment account to be constituted under the coordination center for infrastructure.

In case it is reported that adequate allocation is not available in the budget of the public organizations or bodies for the services under the scope of joint program, financial resource can be allocated from the budget of the metropolitan municipality or, depending on the subject, of the connected organization for these services. The public organizations or bodies shall allocate the amount, in next year's budget, as much as that spent for infrastructural joint investment programs by taking appraisal ratio into consideration. This allocation shall be transferred to the account of the municipality or related connected organization. Unless this sum is paid, the related organization or body shall not be able to make a new investment within the borders of the metropolitan municipality.

For the investments outside the joint programs, ministries, related municipalities and other public organizations and bodies shall make their expenditure from their own budget according to the program identified by the coordination center for infrastructure.

The decisions taken by the coordination center as to joint investments and public transportation are binding for the municipalities and all other public organizations and bodies.

The regulation to be passed by the Ministry of Interior shall identify the working principles and procedures for coordination center for infrastructure, and shall determine the representatives of public organizations and bodies to participate in these committees. The Ministry of Interior shall receive the avis from the Ministry of Finance and the Undersecretary of State Planning Organization as regards the chapters of the regulation to be passed, which are concerning the use of infrastructural investment account, and the provision and transfer of allocation.

Transportation services

Article 9 – For the aim of coordinating any type of transportation on highways, sea ways, inland-waterways and railways in metropolis, a transportation coordination center shall be established under the presidency of the metropolitan mayor or a person appointed by him. The representatives from public organizations and bodies shall be identified by the regulation, to take part in the center. The district mayors or first degree municipality mayors shall participate in the deliberations of the coordination center as members to discuss the issues related to them. Additionally, the representatives of professional organizations (organizations higher than chambers, if any) having public nature shall be invited to the meetings of the transportation coordination center to receive their avis concerning the issues on the agenda which are related to them.

The authorities of provincial traffic commission within the borders of metropolis and certain authorities that are given to the metropolitan municipality by this law shall be exercised by the transportation coordination center. These certain authorities are planning and coordination of traffic services, determination of itineraries, and identification of stations, parking lots and number of taxis, jitneys and service vehicles.

The decisions of the transportation coordination center shall come into force after the approval of the metropolitan mayor.

The decisions of the transportation coordination center concerning public transportation are binding for the related parties to the municipalities and all public organizations and bodies.

The regulation to be passed by the Ministry of Interior shall identify the working principles and procedures for the coordination center, and shall determine the representatives of public organizations and bodies to take part in these committees.

In the exercise of the duties and authorities given to the metropolitan municipality by this Law, the provisions of Law on Highway Traffic dated 13.10.1983, numbered 2918 which are contradictory with this present Law shall not be implemented.

Authorities and privileges of the metropolitan municipality

Article 10 – The metropolitan, district and first degree municipalities have the authorities, privileges and exemptions given by the present Law, and Law on Municipalities and other related provisions of legislation.

Authority on development inspection by the metropolitan municipality

Article 11 – Metropolitan municipality is entitled to inspect the development works of district and first degree municipalities. Authority to inspect includes the requirement, examination and sampling, if necessary, of any type of information and documents. Therefore, any type of information and documents shall be provided within at least fifteen days. In the inspection of development works, the metropolitan municipality can benefit from the expertise of the public organizations and bodies, universities and professional organizations having public nature.

Related municipality is given a period of time not exceeding three months for the elimination of shortcomings and incongruities inspected. Unless the shortcomings and incongruities are removed within this period, the metropolitan municipality is entitled to remove these shortcomings and incongruities.

When the metropolitan municipality identifies unlicensed buildings or edifices built against the license and its annexes, it shall notify the related municipality to fulfill the necessary procedures. Unless the related municipality removes these breaches within three months, the metropolitan municipality is entitled to exercise the authorities mentioned in Article 32 and 42 of the Law on Development Works, dated 3.5.1985, numbered 3194. However, penalty due to the issues within the scope of Article 42 of the Law numbered 3194 cannot be imposed two times.

SECTION FOUR

Organs of the Metropolitan Municipality

Metropolitan municipal assembly

Article 12 – Metropolitan municipal assembly is the decision making organ of the metropolitan municipality and is composed of the members selected according to the principles and procedures stipulated by the related law.

The metropolitan mayor is the president of the metropolitan municipal assembly. The mayors of the other municipalities in the metropolis are natural members to the metropolitan municipal assembly.

The provisions of the Law on Municipalities are applied for district and first degree municipalities of metropolis, and for the other issues related to their working principles and procedures.

Meeting of the assembly

Article 13 – Metropolitan municipal assembly convenes every second week of every month on the day previously determined by the assembly, at the regular meeting place. Meeting in November is the opening meeting of the term. The duration of the meeting coinciding with the budget debate is twenty days and the duration of other meetings is five days at most.

In case it is inevitable to hold a meeting in a place except for the regular meeting place the meeting shall be held at a place within the borders of the municipality to be identified by the mayor on condition that the members are

informed beforehand. Moreover, the place and time of the meeting shall be made public in the city by regular means.

Determination of assembly decisions

Article 14 – Metropolitan mayor can return the decision of the assembly that he finds unlawful for the review, within seven days by stating the legal ground.

The decisions which are not required for review and those which are required for review and are insisted by the quorum of the full number of the members of assembly shall become definite.

The metropolitan mayor can appeal to the administrative court within ten days for the decisions that become definite upon the insistence of the assembly.

The decisions shall be sent to the most senior civil administrator of the locality within seven days at latest as they become definite. The decisions which are not sent to the civil administrator shall not come into force.

Civil administrator can appeal to the administrative court within ten days for the decisions that he finds unlawful.

The decisions of district and first degree municipal assemblies and their legal ground shall be sent to metropolitan mayor except for the decisions related to the budget and development works. Within seven days, the metropolitan mayor can ask for the review of the decisions that he finds unlawful. If the related assembly insists on the decisions by the quorum of full number of the members of assembly, the decision can become definite.

The definite decisions shall be sent to the metropolitan municipality within seven days. The metropolitan mayor can appeal to the administrative court within ten days for the annulment of the definite decisions.

Within three months after the reception of the decisions on development works taken by district and first degree municipalities within the sphere of metropolis, the metropolitan municipal assembly shall evaluate their conformity with the master plan on development works. The decisions shall be forwarded to the metropolitan mayor as they are or by approving it after making changes.

Expertise commissions

Article 15 – At every opening meeting of term, the metropolitan municipal assembly can establish expertise commissions to be composed of a minimum of five and a maximum of nine persons from among its members.

Expertise commissions shall be formed in such a way that the number of every political party group and independent members in the metropolitan municipal assembly is proportioned to the full number of the members of assembly. It is compulsory to establish development and public works commission, environment and health commission, planning and budgeting commission, education, culture, youth and sports commission, and transportation commission.

Following the assembly meeting, in order to finalize the forwarded procedures, the development commission and other commissions shall convene for ten workdays and five workdays at most, respectively. Unless the commission submits the report to the assembly at the end of this period, the assembly presidency shall directly get the subject at issue under the scope of the assembly agenda.

The commission can benefit from the experts. According to the relevance to the agenda, the representatives of organizations, professional organizations having public nature, related departments of universities, trade unions

(organizations higher than chambers and confederations of trade unions, if any), specialized non-governmental organizations, and invited experts can participate in and submit their opinion without having right to vote.

The works under the sphere of duties of expertise commissions shall be deliberated and then decided in the metropolitan municipal assembly.

The commission reports are public. And they are made public via different means and can be provided to those who would like to have a copy in return of fee to be identified by the metropolitan municipal assembly.

City council

Article 16 – The city council is composed of five members to be elected from among its members by secret ballot every year, in the first regular meeting of metropolitan municipal assembly under the presidency of mayor, and of five members to be selected every year by the metropolitan mayor from among the heads of units, one being secretary general and one being the head of financial unit.

Secretary General shall preside over the meetings of the city council unless the mayor cannot do so.

The president and the selected and elected members shall monthly be paid the gross salary which shall be calculated by multiplying it by the coefficient of the index figure determined for civil servants. The employee members of the city council shall be paid half of this amount.

Metropolitan mayor

Article 17 – The metropolitan mayor is the head of metropolitan municipality administration and is the representative of the municipal legal personality. The metropolitan mayor is directly elected by the electorates within the borders of the metropolitan municipality in line with the principles and procedures stipulated by the related law.

The proxy of the metropolitan mayor shall be identified according to the procedures of the Law on Municipalities. However, the mayors of district and first degree municipalities within the sphere of metropolis cannot be deputy of metropolitan mayor.

The mayors of district and first degree municipalities within the sphere of metropolis cannot serve in the management and supervision organs of political parties during their post. They cannot be president of professional sports clubs or cannot serve in the management of these sports clubs.

Duties and authorities of the metropolitan mayor

Article 18 – The duties and authorities of the metropolitan mayor are;

- a) to manage and administer the municipal organization, to protect the rights and interests of the locality and the municipality as the highest ranking chief of the municipal organization,
- b) to administer the municipality according to the strategic plan; to formulate institutional strategy of municipal administration, to prepare and implement the budget in convenience with these strategies; to identify, supervise and evaluate the criteria for municipal activities and personnel performance, to submit the reports which are related to these to the assembly,
- c) to preside over the metropolitan municipal assembly and the city council, to implement the decisions of these organs,

- d) to take necessary measures for efficient and productive implementation of duties and services given by this Law to the metropolitan municipality,
- e) to make sure that the metropolitan municipality, its connected organizations and enterprises are efficiently and effectively administrated, to prepare draft budgets of the metropolitan municipality, its connected organizations and enterprises, and to prepare their proposal for change and definite budget statement,
- f) to pay attention to the rights and interests of metropolitan municipality, to collect receivables and incomes,
- g) to sign contracts on behalf of the metropolitan municipality, to receive grants and to make necessary savings on condition that the decisions of authorized organs are received,
- h) to represent the metropolitan municipality in the trials or in public authorities as defendant or plaintiff, or to have the lawyers of the municipality or of the connected organization or private lawyers to represent the metropolitan municipality,
- i) to assign the municipal employees, to inspect the municipality and its connected organizations,
- j) to solemnize marriages in person, should the occasion arise,
- k) to exercise the metropolitan duties and authorities of mayors, which are bestowed by the other laws,
- l) to delegate some or certain duties and authorities, if necessary, to the mayors of district or first degree municipalities,
- m) to use the allocation of the budget, which is saved for the poor to establish centers for disabled in order to support their activities.

In order that the metropolitan municipality might delegate its duties to district municipalities or the municipalities of lower echelon according to Article 7, the no objection by the metropolitan mayor is required.

Expiration of the mayoralty post

Article 19 – Without prejudice to the provisions of the Law on Municipalities, the mayors of metropolitan, district and first degree municipalities shall be relieved of their post upon the verdict of the Council of State, shall they involve in actions or acts causing the dissolution of the metropolitan municipal assembly.

Advisers of mayor

Article 20 – The advisers can be posted not exceeding ten and five persons for the metropolitan municipalities with the population exceeding two million, and for the other metropolitan municipalities, respectively. Those who shall be commissioned as advisers must, at least hold a bachelor's degree. There shall not be any right for the officials arising from being commissioned as adviser, civil servant, contract personnel or worker. Term of office for advisers is limited with the term of their contract, yet this term cannot exceed the mayor's term of office.

Including all types of payments, the advisers are paid the gross salary on a scale to be identified by the metropolitan municipal assembly not exceeding 75% of the gross salary of the secretary general of the metropolitan municipality.

SECTION FIVE

Organization and Personnel of Metropolitan Municipality

Organization the of metropolitan municipality

Article 21 – The organization of the metropolitan municipality is composed of the secretariat general, departments and directorates in conformity with norm personnel principles.

The establishment, dissolution or unification of the units can be realized upon the decision of the metropolitan municipal assembly.

There is not a deputy mayor in the metropolitan municipality. In order to fulfill the services efficiently and effectively and to assist the secretary general, five and three deputy secretaries general can be appointed, at most, for the municipalities with the population exceeding three million and the other municipalities, respectively.

Secretary General and his deputies shall fulfill the metropolitan services on behalf of the mayor under his directive and his responsibility pursuant to the provisions of legislation, aims and policies of the municipality, and its strategic plans and annual programs.

Employment of personnel

Article 22 – The metropolitan mayor shall appoint the metropolitan personnel. Directors and higher ranking officials shall be submitted to the knowledge of metropolitan municipal assembly in the first meeting.

The Ministry of Interior shall appoint the secretary general upon the proposal of the metropolitan mayor. Those who are appointed to the post of secretary general, and deputy secretary general shall exactly benefit from all rights foreseen in the related legislation for the general directors of ministries included in the class of general administrative services, and for the independent heads of ministry departments, respectively.

The heads of departments shall exactly benefit from executive compensation and severance pay as benefited by the heads of departments of connected general directorates.

Upon the decision of the city council and in accordance with performance and in proportion with the period of work including sick leaves and annual leaves, the municipal employees, except for contract employees and workers, shall be paid premiums two times a year at most, not exceeding the amount of 10% of the total number of officials, and of the amount to be calculated by multiplying the annual coefficient (30.000) implemented for the civil servants by the index figure.

SECTION SIX

Financial Provisions

Revenues of the metropolitan municipality

Article 23 – The revenues of the metropolitan municipality are as follows:

- a) the share to be sent by the Bank of Provinces out of the shares given to the district and first degree municipalities over the total collection of the general budget tax revenues, within the framework of the ratios to be identified by the Council of Ministers,
- b) the share of 5% to be calculated by the Ministry of Finance over the total collection of the general budget tax revenues within the borders of metropolitan municipality and to be deposited in the related metropolitan municipality until the end of the following month,
- c) according to the ratios and principles stipulated in Law on Municipal Revenues numbered 2464, the Entertainment Tax to be collected by the metropolitan municipality from book making including horse races shall be distributed to the municipality where the book making races are realized, to the other district and first degree municipalities in accordance with their population, and to the metropolitan municipality at a ratio of 20%, 30, and 50%, respectively.

- d) any type of municipal taxes, duties and levies to be collected in the social and cultural facilities left to the metropolitan municipality, sports, entertainment and resting places, and green areas,
- e) putting up, allocation and maintenance of any type of notices and adverts on the areas mentioned in clause (g), first paragraph of Article 7, and the buildings ranging with these areas
- f) 50% of the revenues collected from the operation of the parking lots identified according to the clause (f) of Article 7, after the allocation of 50% of this amount to the district and first degree municipalities in accordance with their population,
- g) contributions to highways, water supply and sewerage expenses to be collected in line with the ratios and principles stipulated in the Law on Municipal Revenues, numbered 2464 provided that the services are fulfilled by the metropolitan municipality,
- h) rental income, interests and fines,
- i) assistance by public administrations and organizations,
- j) revenues to arise from the surplus between the revenues and expenditures in the final accounts of the connected organizations
- k) stocks from the gross revenues of economic enterprises of metropolitan municipality in the ratio to be identified by the metropolitan municipal assembly,
- l) incomes from movable and immovable properties of the metropolitan municipality,
- m) costs to be charged in return for the services to be fulfilled,
- n) conditional and unconditional donations,
- o) others.

The Council of Ministers is entitled to double or decrease the share ratio of %5 mentioned in clause (b), first paragraph to the legal limit. 75% of this share shall be deducted from this amount and deposited in the account of the related municipality. And the remaining 25% shall be distributed to the metropolitan municipalities in accordance with their population. The Ministry of Finance shall fulfill the calculation and distribution.

Unless the metropolitan municipalities and their connected organizations, and district and first degree municipalities do not pay the sums that they are supposed pay each other from the collected taxes and similar financial obligations and the costs of water supply, waste water and natural gas; upon the demand of the related municipality or the connected organization the Bank of Provinces shall deduct the sum at issue from the share of general budget tax revenues of the obligor municipality, and shall deposit the remainder in the account of the creditor municipality. The metropolitan mayor and the accountant shall be responsible, in person, for the indemnification of all types of losses such as interest etc. emanating from delay. The provision of this paragraph shall be applied for the metropolitan mayors, directors general of the connected organizations and accountants who do not timely fulfill all types of transfers to the accounts of district and first degree municipalities.

Expenditures of the metropolitan municipality

Article 24 – The expenditures of the metropolitan municipality are as follows:

- a) provision, repair and maintenance of municipal service buildings,

- b) salaries, wages, allocations, attendance fee, per diem, training for services etc. given to the personnel of the municipality and the members of the connected organizations,
- c) assistance to district and first degree municipalities and connected organizations, and joint project expenditures,
- d) all types of infrastructure, construction, repair and maintenance,
- e) services to be delivered by the municipal police and fire brigade, and other services,
- f) expenses on the follow up and collection of the costs in return for taxes, duties, levies, contributions, fees in return for services, and other revenues,
- g) partnership interest and membership fees related to the companies and establishments that the municipality is party of, and unions,
- h) construction, protection and maintenance of cemeteries,
- i) other payments related to interest and borrowing, and insurance expenditures,
- j) social services and assistance to lower income families, the poor and homeless, and disabled,
- k) prosecution and cost of execution,
- l) ceremonies, accommodation and promotions,
- m) solicitor's cost, expenditures on consultancy and inspection,
- n) joint services and other projects collectively realized with national and international public sector, private sector and non-governmental organizations on the issues of public interest,
- o) expenditures on sports, social, cultural and scientific activities,
- p) expenditures on public opinion polls and researches concerning the services of the metropolitan municipality,
- q) and other expenditures for the fulfillment of duties and services given by the law.

Budget of the metropolitan municipality

Article 25 – The budget of the metropolitan municipality and the budgets coming from the district and first degree municipalities shall be submitted to the assembly of the metropolitan municipality. The assembly shall either accept them as they are or by making changes on them in such a way that the investments and services are coherent with one another.

The budgets of the metropolitan, district and first degree municipalities shall be discussed and decided by negotiating together in the same meeting term in the metropolitan municipal assembly, and shall be published as one single budget.

While accepting the budgets of district and first degree municipalities, the metropolitan municipal assembly is entitled;

- a) to remove or change the articles and statements in the budget texts which are contrary to laws, bylaws, and regulations,
- b) to remove the revenues which the municipality is not entitled to collect; to arrange the amounts and rations of taxes and fees that are identified above or below the legal limits according to the limits foreseen in the law,

- c) to add the allocation which is supposed to be included in the budget for the definite municipal debts but which is not included in reality,
- d) to add the allocation which is necessary for the investments under joint investment programs.

The appeals can be made to the Council of State within ten days for the changes made by the metropolitan municipal assembly in the budgets of district and first degree municipalities. The Council of State adjudicates the case within thirty days.

The provisions of the Law on Municipalities shall be applied to the other issues as to the preparation and implementation of the budget.

Establishment of company

Article 26 – In compliance with the procedures stipulated in the related law, the metropolitan municipality can establish capital stock companies within its sphere of duties and services. The secretary general and the personnel having an administrative position in the municipality or in the connected organizations can serve in the management and inspection boards of these companies. Without being subjected to the provisions of the Public Tender Law numbered 2886, the metropolitan municipality can operate its refreshment kiosks, parking lots and teagardens or it can turn them over to the companies of which more than 50% is owned by the municipality or by the connected organizations, and to the companies of which more than 50% is owned by these companies. The metropolitan municipal assembly shall decide on the period and the value of turnover.

SECTION SEVEN

Miscellaneous

Inter-municipal service relations and coordination

Article 27 – The metropolitan municipality shall provide cohesion and coordination amongst the municipalities within the metropolitan sphere with regard to the fulfillment of services. In case a conflict arises between the metropolitan, district and first degree municipalities concerning the execution of services, the metropolitan municipal assembly shall be entitled to guiding and regulation decision.

In the newly established metropolitan municipalities, the metropolitan municipal assembly shall decide on the principles for the distribution of squares, boulevards, streets, roads, parking areas, sports and cultural facilities amongst the metropolitan municipality and the other municipalities within the metropolitan sphere.

The metropolitan municipal assembly shall decide on the distribution of the neighboring areas amongst the metropolitan municipality, and the district and first degree municipalities.

Within the framework of the financial and technical means, the metropolitan municipality has to equitably execute the services cited in Article 7, by taking the population and service areas into consideration, amongst the other municipalities within metropolitan sphere that shall benefit from these services. The metropolitan, district and first degree municipalities can jointly fulfill some or certain duties belonging to the district or first degree municipalities based on the decision of the metropolitan municipal assembly on condition that they cover the value, and that they require so.

The metropolitan municipality can jointly develop projects and make investments with the district and first degree municipalities. The metropolitan municipality can provide financial and in-kind assistance to the district and first degree municipalities for the project finance under the investment program of the related municipality based on the proposal of the metropolitan mayor and the decision of the assembly on condition that the assistance shall not exceed 3% of last three years' definite budget revenues and that the allocation is made in the budget.

The metropolitan municipality and the connected organizations can meet the cash requirements of one another with the approval of the metropolitan mayor. Interest shall not be charged for such kind of borrowings.

In case any investment to be done simultaneously pertains to the metropolitan municipality and some of its connected organizations and in case it is understood that the central execution of investment shall decrease the costs, the metropolitan municipal assembly can decide on one of the organizations to do the investment. Therefore, the expenses belonging to the part that pertains to the other related institution shall be entered as debt in the account of that institution, and as receivable in the account of investor institution.

Other provisions

Article 28 – The provisions of the Law on Municipalities and of the related Laws which are not contrary to this Law shall be implemented for metropolitan, district and first degree municipalities according to the relevance.

Amended provisions

Article 29 – The Law on Local Administrations dated 18.1.1984, numbered 2972, and Article 4 of the Law on the Election of Village Headmen and Council of Elders are amended as follows:

Article 4 – In the election of the metropolitan mayor, the electoral district is inside the borders of the metropolitan municipality.

In the election of district and first degree mayors, and of the members of municipal assembly within the borders of the metropolitan municipality, the electoral districts are inside the borders of district and first degree municipalities.

Article 30 – The expression of “first degree municipality” is added to come after the expression of “every district” mentioned in clause (a) in Article 24 of the Law numbered 2972.

Repealed Provisions

Article 31 – The Decree Law on the Management of the Metropolitan Municipalities, dated 27.6.1984 and numbered 3030 is amended to be the Law on the Enactment. This Law and its annexes, and its amendments are repealed. And the third paragraph of clause (a), first paragraph, Article 24 of the Environmental Law dated 9.8.1983 and numbered 2872 is repealed.

TEMPORARY ARTICLE 1 – The metropolitan municipality shall prepare the metropolitan master plans on development works with a scale of 1/25.000, or shall have them prepared within two years at latest beginning from the enactment of the present Law.

TEMPORARY ARTICLE 2 – On the enactment date of the Law, the borders of the metropolitan municipality shall be the provincial civil borders in the province of Istanbul and Kocaeli. On condition that the office of governor shall be accepted as center and shall remain within civil borders, the circle of twenty kilometers, thirty kilometers and fifty kilometers in radius shall constitute the border for the other metropolitan municipalities with a population up to one million, from one million to two million, and more than two million, respectively.

The district municipalities and the cities within these borders shall become metropolitan district municipalities and first degree municipalities, respectively. With this Law, the provisions of the Law on Municipalities on the annulment of legal personality or on the joining to another municipality shall not be applied for these municipalities. The legal personality of the villages within these borders shall expire and they shall transform into quarters. The metropolitan municipal assembly shall determine on the district and first degree municipalities to be joined by the quarters that are formed this way. The legal personality of the forest villages shall continue. However, without prejudice to the provisions of the other laws on forests, these villages shall be considered to be the neighboring areas of the metropolitan municipality in terms of development. The duty and the authority on water supply and sewerage shall belong to water supply and sewerage management which is connected to the metropolitan municipality.

Upon the demand of the municipal assembly and the council of elders within six weeks as of the promulgation of this Law, the following can be included into the borders of the metropolitan municipality thanks to the decision of the metropolitan municipal assembly and the approval of the Ministry of Interior without any other procedure. These are; the municipalities and villages within the civil borders of the districts included in the metropolitan municipality sphere according to first paragraph; and the municipalities and villages outside the distances mentioned in the first paragraph, which are amongst the villages within the borders of neighboring areas of the municipalities that are included in the sphere of metropolitan municipality. The same decision of the assembly shall also stipulate the district and first degree municipalities that these villages join as quarter.

By taking into consideration the requirements of settlement plans within the borders of the municipalities that are included in the metropolitan sphere in line with the first paragraph, the Ministry of Interior shall be able to make necessary changes upon the demand of the metropolitan municipal assembly within one year beginning from the promulgation of this Law.

Until the first general elections for local administrations, the organs of the municipalities included in the metropolitan municipality borders shall function as the organs of the metropolitan district or first degree municipalities, and the village headmen and council of elders shall function as the quarter headmen and council of elders.

The property holdings, rights, receivables and debts of the villages of which the legal personality is repealed shall be turned over to the municipality they join as quarter.

The changes in civil borders emanating from the inclusion in the metropolitan sphere shall be resolved in accordance with the occasion of inclusion and in conformity with the provisions of the Law on Provincial Administration numbered 5442.

TEMPORARY ARTICLE 3 – For the metropolitan municipalities, their connected organizations, and the companies of which more than %50 belongs to the metropolitan municipality; their receivables, as of 30.6.2004, from public organizations and bodies, which are subjected to public and private law shall be deducted from their debts to the other public organizations and bodies within six months following the promulgation of this Law. The expression of receivables and debt within the framework of this article shall also cover the accessory ones and the fines related to these receivables and debts.

The debts of the organizations under the umbrella of the paragraph above, which are or are not subject to deduction, shall be collected by making a deduction not exceeding 40% of the monthly shares to be allocated from the general budget tax revenues.

The related organization and the reconciliation commission shall identify the deduction procedures to be fulfilled according to this article without relating to the year budget laws. The Council of Ministers shall decide on these deduction procedures upon the proposal of the Ministry that the Undersecretary of Treasury is connected to. By taking into account the capacity of the related organizations for paying debts, the Council of Ministers is entitled to make sum due payable on the installments plan, to implement the increase and interest on the portion under installment plan as of the promulgation of the Law, and to rebate not exceeding the accessory and the fines of this debt.

The reconciliation commission shall be composed of a minister to be assigned by the Minister that the Undersecretary is connected to, and the representatives from the Ministry of Interior, the Ministry of Finance, the Undersecretary of State Planning Organization, the Undersecretary of Treasury, the Court of Accounts, and the Bank of Provinces. A separate reconciliation commission is not established for the metropolitan municipalities. The commission specifically established for the municipalities shall also serve for the metropolitan municipalities.

TEMPORARY ARTICLE 4 – The mayors who are the presidents or who are working at the administration of professional sports clubs at the promulgation date of this Law shall cease to hold office until 1.1.2005 at latest.

Enforcement

Article 32 – The clause (b), first paragraph, Article 23 of this Law shall become effective on 1.1.2005. The second paragraph of the same article shall come into force at the beginning of the month following its promulgation. The other articles shall become operative on the date of promulgation.

Execution

Article 33 – The Council of Ministers shall execute the provisions of this Law.