

United Nations Development Programme

Terminal Evaluation of UNDP/GEF Project: Support to Sustainable Transport in the City of Belgrade (STB)

(Project ID: 3781)

Terminal Evaluation Report

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ABBREVIATIONS

Acronym	Meaning
APR	Annual Progress Report
AWP	Annual Work Plan
CDM	Clean Development Mechanism
CDR	Combined Delivery Report
CER	Certified emission reduction
CoB	City of Belgrade
COPERT	Computer Programme to calculate Emissions from Road Transport
EA	Executing Agency
EBRD	European Bank for Reconstruction and Development
EOP	End of project
EPOMM	European Platform on Mobility Management
EU	European Union
GDP	Gross domestic product
GEF	Global Environment Facility
GHG	Greenhouse gas
GoS	Government of Serbia
GPC	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories
GSP	Public Transport Company of Belgrade
HOV	High Occupancy Vehicle
IEA	International Energy Agency
INC	Initial National Communication
LDA	Belgrade Land Development Agency
LPAC	Local Project Advisory Committee
M&E	Monitoring and evaluation
MoAEP	Ministry of Agriculture and Environmental Protection
MoCTI	Ministry for Construction, Transport and Infrastructure
MoERD	Ministry of Economy and Regional Development
MoT	Ministry of Transport
MRV	Monitoring, reporting and verification
MTE	Mid-term evaluation
NEX	National Execution
NGOs	Non-governmental organizations
NIM	National Implemented Modality
NMV	Non-motorized vehicles
NPD	National Project Director
NPM	National Project Manager
ProDoc	UNDP Project Document for “Support to Sustainable Mobility for the City of Belgrade”
PIR	Project Implementation Reports
PIU	Project Implementation Unit
PM	Project Manager
PPM	Project Planning Matrix
PSC	Project Steering Committee
SGP	GEF Small Grants Programme
SIDA	Swedish International Development Agency

Acronym	Meaning
SMART	specific, measurable, attainable, relevant and time-bound
SNC	Second National Communication
STB	Support to Sustainable Mobility for the City of Belgrade
SR	Serbia Republic
SUMP	Sustainable Urban Mobility Plan
SUT	Sustainable Urban Transport
SUTP	Sustainable Urban Transport Plan
TE	Terminal Evaluation
TEEMP	Transportation Emissions Evaluation Model for Projects
ToR	Terms of Reference
ToT	Training of trainers
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

SYNOPSIS

Title of UNDP supported GEF financed project: Support for Sustainable Transport in the City of Belgrade

UNDP Project ID: PIMS 3781

GEF Project ID: 3759

Evaluation time frame: March 2010 to December 2014

Date of evaluation report: 16 December 2014

Region and Countries included in the project: Serbia

GEF Focal Area Objective: CCM-4: Promote energy efficient low-carbon transport and urban systems

Implementing partner and other strategic partners:
- Implementing Partner: United Nations Development Programme (UNDP)
- Executing Entity: Ministry of Agriculture and Environmental Protection, Government of Serbia (under NIM modality)
- Implementing Entity: City of Belgrade

Evaluation team members: Mr Roland Wong, International Consultant

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EXECUTIVE SUMMARY

This report summarizes the findings of the Terminal Evaluation Mission conducted during the November 17-21, 2014 period for the UNDP-GEF Project entitled: Support to Sustainable Transport in the City of Belgrade (hereby referred to as the STB Project or the Project), that received a USD 950,000 grant from the Global Environmental Facility (GEF).

Project Description

The STB Project was designed specifically to "*reduce local and GHG emissions associated with the transport system in Belgrade while improving access"* with the following targets:

- a direct target of "*285,000 tonnes CO_2/year";* and
- GHG reductions associated with passenger transport system in Belgrade of 17% in 2020 relative to 2007 levels.

This was to be achieved according to actions proposed in the Project Document of April 2010. When the STB Project was commenced in February 2011, the City was already undertaking its own actions in this regard, and Project activities were re-scoped Inception Workshop to assist the City in addressing their new priorities. These changes are summarized on Table A.

Table A: Comparison of Intended Project Outcomes from ProDoc and Inception Report

Intended Outcomes in April 2010 ProDoc	Revised Outcomes in February 2011 Inception Report
Outcome 1: Integrated land use and urban transport planning at the metropolitan level. This would be achieved through development of integrated land-use plans, formulating a working group on transport-land use planning, and hosting international conferences on EU and regional transport policies.	**Revised Outcome 1:** A completed planning process for launching the preparation of a Sustainable Urban Transport Plan (SUTP).
Outcome 2: Rationalizing parking regulations. This was to be achieved through the setup of a modernized parking system based on supply and demand and marginal cost pricing, and park-and-ride systems with cycling facilities.	**Revised Outcome 2:** *Promotion of the cycling transport mode* through preparation of cycling maps for Belgrade and a cycling website, conducting a cycling campaign "Let's cycle in Belgrade", and participation in European Mobility Week.
Outcome 3: Intelligent transport systems. This was to be achieved through setup of a public transport information center to direct schedules and dispatch, pilot programme for a high-occupancy vehicle (HOV) lane, and a pilot programme for car and taxi-sharing using mobile phones and social networking.	**Revised Outcome 3:** *Safe and Sound to Schools* through training on safe means of traveling to schools, study on school participation in program, workshops with children on maintenance and repair of bicycles, and completion of a "Safe Roads to Schools" awareness campaign.
Outcome 4: Institutional transformation of government, businesses and general public to embrace sustainable transport. This would be achieved through training on enterprise development for public transport operators, training to improve and synchronize taxi and other para-transit operations, capacity building for regulatory development, and a case-study guide to replicate project elements.	**Revised Outcome 4:** Capacity Building. This would be achieved through training trainers on eco-driving for public transport drivers with the Public Transport Company in Belgrade (GSP), monitoring the impact of eco-driving training, and the completion of case studies from the Project on sustainable transport initiatives for wider dissemination to transport planners and other cities in Serbia.

With the City already implementing its own activities from the April 2010 ProDoc such as the parking regulations (old Outcome 2) and intelligent transport systems (old Outcome 3), the City proposed that the Project funds be primarily used to strengthen sustainable transport planning, promote of low carbon transport options and build capacity. The "revised" activities included cycling, safe passage to school for children and eco-driving for public transit workers, and the formulation of a "sustainable urban transport plan" (SUTP) as originally planned. Two significant issues emerged from these changes:

- The Inception Report failed to address how the Project was going to generate GHG reductions from its activities nor did it address the issues of emission baselines from which GHG emissions reductions from the Project could be calculated; and
- The Inception Report did not address that the unrealistic target of 285,120 tonnes CO_{2eq} per year by the end of the Project (EOP). In the experience of the Evaluator, attaining this level of annual emissions from a sustainable transport project would require significant modal shifts from private car to public transport in 4 years[1]. With the Project budget of USD 950,000 spread over 4 years, this was not realistic.

The ProDoc was signed in 21 April 2010 with actual Project activities commencing in November 2010, and a Project terminal date of November 30, 2014.

Evaluation Ratings

The overall rating of the Project is moderately satisfactory (MS). This is based on the following outcomes:

- The Project design of March 2010 (based on information from 2008 and 2009) was also overly ambitious in scope, notably with the GHG reductions targets and considering the GEF budget of USD 950,000 spread over a 4-year period;
- The significant changes made to the Project design made by City of Belgrade during the Inception workshop in February 2011, 2 to 3 years after the Project was designed, to reflect its priorities which had changed during 2009 and 2010. These changes, however, resulted in Project activities that were going to generate less GHG emission reductions than the original activities;
- Since the original GHG reductions targets could not be reduced during the life of the Project (and are not allowed to be reset due to GEF rules), the STB Project was saddled with unrealistic GHG reduction targets that were not achievable;
- Successful delivery of all revised Project components from the February 2011 Inception Workshop despite generation of lower volumes of GHG emission reductions. This did require strong efforts of the PIU to coordinate a wide range of stakeholders considering the numerous changes in counterpart staff[2], and the additional efforts required to inform new officials of the Project activities for their approvals and support. This included delivery of:
  - SUTP/SUMP development plans for the Belgrade Land Development Agency with committed funding from the Agency itself and an EBRD grant of over USD 500,000;
  - cycling safety regulations and development of cycling infrastructure in Old Belgrade with follow-up actions by the City to increase the scale of development;

[1] To achieve an annual reduction of 285,120 tonnes CO_{2eq} would be equivalent to avoiding the use of petrol for 150,000 cars for a roundtrip of 26 km in the City of Belgrade for 220 days per year (assumed petrol consumption of 13 liters/100 km). There was no possibility of achieving this scale of intervention on the STB Project within a 4-year project; hence, this target was not realistic.

[2] There were 2 administrative changes within the Belgrade Secretariat of Transport and the Land Development Agency, and within the MoAEP during the course of the 57-month Project.

  - the "Safe Routes to Schools" demonstration for an additional 14 primary schools in Belgrade and committed budgets for developing pedibus infrastructure for 50 additional primary schools in Belgrade in 2015;
  - transfer of eco-driving skills for the City Public Transit Company of Belgrade (GPS) that has led to plans and budget for 2015 and 2016 to scale-up eco-driving skills to its pool of 3,500 bus drivers as well as other drivers of public vehicles in Belgrade;
- The overall satisfaction of the City of Belgrade and MoAEP with the impact of the Project in raising issues of sustainable transport amongst their personnel and validating their current efforts and new approaches to incorporate GHG emission reduction considerations in their strategic documents. With the City actively improving their public transport systems, City officials and MoAEP have said that there was value in these new approaches to sustainable transport;
- Replication efforts to disseminate guidelines and case studies of SUT measures to other cities in Serbia were not completed in December 2014.

The overall Project sustainability rating is moderately unlikely (MU). This is primarily due to:

- Heightened awareness in the City of sustainable transport development;
- Confirmed financing for next phases of SUTP/SUMP;
- Investments being made in the expansion of the cycling network and pedi-bus systems for schools;
- Efforts to strengthen legislation on the safety of cycling in Belgrade;
- Concerns over financial resources available for the expansion of eco-driving training by GSP. This is limited by the lack of on-board fuel consumption monitoring equipment for which no funds are currently available for purchase and installation on buses;
- Concerns over the availability of sufficient budget to finance sustainable urban transport measures.

Table A provides a summary of the terminal evaluation of the STB Project.

Conclusions

- The Project had a number of significant design issues including:
  - An unrealistic GHG emission reduction target of 285 ktonnes per year CO_{2eq} by the EOP of the Project; and
  - A small Project budget of USD 950,000 that was to undertake some of Belgrade's sustainable transport priorities such as park-and-ride plans and improvements to public transport in the Old City. The scale of these sustainable transport measures, however, requires a project of longer duration and larger budget, which the STB Project did not have;

- The STB Project had a number of implementation issues including:
  - the Project being implemented 3 years after it was designed, and during a time when many of the proposed activities were already being implemented. This placed the Project in a position where its activities would have less influence and less impact than originally planned;

Table A: Evaluation Ratings[3]

1. Monitoring and Evaluation	*Rating*	2. IA & EA Execution	*Rating*
M&E design at entry	2	Quality of UNDP Implementation	3
M&E Plan Implementation	3	Quality of Execution - Executing Entity (MoAEP)	5
Overall quality of M&E	2.5	Overall quality of Implementation / Execution (City of Belgrade)	4
3. Assessment of Outcomes	**Rating**	**4. Sustainability[4]**	**Rating**
Relevance	4	Financial resources	2
Effectiveness	4.2	Socio-political	4
Efficiency	4	Institutional framework and governance	4
Overall Project Outcome Rating	3.9	Environmental	4
		Overall likelihood of sustainability	2

- unforeseen Project resources expended on efforts to familiarize new government counterparts on the Project during its preparation and implementation. This was a result of more than 4 local and national elections at the City and MoAEP during the 57-month course of the STB Project and two administrative changes during the 2-year preparatory phase. This added to the difficulties of implementing this Project;
- implementation of scaled-down STB Project activities that would generate significantly less GHG emission reductions from the February 2011 Inception Workshop than the original design; and
- the mid-term evaluation taking place 3 years into the Project when 81% of the budget was spent, making adaptive management of the Project very difficult after the MTE;

- The results of the STB Project included preparations for Belgrade's SUPT, awareness raising activities for cycling in Belgrade, and pilot implementation of safe passage to schools for children and eco-driving skills for public bus drivers. This led to a primary benefit of the STB Project to the City and MoAEP in raising their awareness of sustainable urban transport in Belgrade and to improve the confidence and knowledge level of the City on different approaches to developing sustainable transport measures, especially in the Old City. This is evident in the engagement of the City into sustainable transport investments including their investments into expanded programs on cycling, safe passage to schools and eco-driving skills, located mainly on the side of Old Belgrade;

- The sustainability of the Project is affected by the lack of funds for the purchase and installation of on-board fuel consumption monitoring gauges that would strengthen MRV efforts to reduce fuel consumption on public vehicles. This rating has been given notwithstanding the fiscal resources that have been availed to Belgrade's public bus company, GSP, to transfer eco-driving skills to all bus drivers and other public vehicle operators.

[3] Evaluation rating indices (except sustainability – see footnote 2): 6=*Highly Satisfactory (HS)*: The project has no shortcomings in the achievement of its objectives; 5=*Satisfactory (S)*: The project has minor shortcomings in the achievement of its objectives; 4=*Moderately Satisfactory (MS)*: The project has moderate shortcomings in the achievement of its objectives; 3=*Moderately Unsatisfactory (MU):* The project has significant shortcomings in the achievement of its objectives; 2=*Unsatisfactory (U)* The project has major shortcomings in the achievement of its objectives; 1=*Highly Unsatisfactory (HU):* The project has severe shortcomings in the achievement of its objectives.

[4] Sustainability Dimension Indices: *4 = Likely (L):* negligible risks to sustainability; *3 = Moderately Likely (ML):* moderate risks to sustainability; *2 = Moderately Unlikely (MU):* significant risks to sustainability; and *1 = Unlikely (U):* severe risks to sustainability. *Overall rating is equivalent to the lowest sustainability ranking score of the 4 dimensions.*

- There is a need to continue technical assistance to the City and MoAEP in sustainable transport development that would include:
  - A program to collect baseline data for transport-related emissions and the use of the COPERT model to analyze vehicle emissions to align with EU-practices;
  - Approaches for stakeholder inclusiveness (i.e. use of stakeholder questionnaires and consultations) in the design and development of sustainable transport measures;
  - Strategic approaches to sustainable transport development in the City involving the need to remove the number of cars in the Old City. These strategies now include improved public transport and the increased pedestrianization in the Old City supported by improved cycling corridors;
  - Development of measures to ensure sustainability of improved public transport and increased pedestrianization of Old Belgrade and the rest of the City through the generation of revenue streams to support the 50% subsidies currently provided to GSP public transit services in Belgrade. These revenue streams could be generated from reductions in municipal operating costs for Belgrade (such as reduced energy costs from energy efficiency measures).

Recommendations

Recommendation 1: MoAEP and the City of Belgrade need to collect transport-related baseline data. While this may already be occurring, the collection of this data is important for the country in its obligations to report GHG emissions to UNFCCC. However, to accelerate the development of MoAEP's capacity to address transport-related GHG emissions and design of appropriate policies, MoAEP should seek technical assistance from a donor agency on the collection of such data. In addition to the need for collecting more data on public transit and conducting full-fledged travel demand surveys in Belgrade, MoAEP should look at other sustainable transport projects such as the one in Bratislava supported by UNDP-GEF where cameras were setup at the strategic entry points into the City to get a profile of vehicle types being operated in Bratislava City. This data along with fuel sales data for Bratislava were calibrated against a COPERT model setup for Bratislava to provide a reasonable estimate of GHG emissions for the City. These approaches will assist MoAEP in designing transport-related policies, and provide valuable baseline data on which future transport interventions can be compared against to assess their impact on transport-related GHG emissions.

Recommendation 2: Institutional strengthening and funding are required to accelerate City's learning pace of EU standards for sustainable urban transport and the preparation of SUTPs/SUMPs. Technical assistance from a donor agency is required to sensitize City technical personnel to incorporate GHG emission reductions in their strategic and design documents for improving urban transport in Belgrade. This may include the procurement and training in the use of modernized tools for planning sustainable transport measures such as Aimsun Microsimulation[5], a software for computerizing traffic models that will inform the development of a SUTP/SUMP and other emerging infrastructure level interventions. The presentation of outputs from this type of software can be visually-friendly and allow stakeholders to clearly see the causes of traffic congestion and proposed measures to mitigate that may lead to accelerated approvals. It can also be used to demonstrate the impact of traffic volumes versus differing land uses which can affect and inform integration of urban land use and transport policies.

[5] www.aimsun.com

Recommendation 3: Future assistance to Belgrade on SUT measures should focus on the following activities:

- Equipping all buses with fuel consumption gauges to support fleet skills for eco-driving;
- Synchronization of signals and priority signalling for public transit;
- Improving public transit services to Old City along with support for park-and-ride transit facilities in outlying areas. This will provide Belgrade citizens with an alternate means of transport from the suburbs into the Old City; and
- Pedestrianization of Old Belgrade to facilitate NMV modes of transport and a corresponding reduction in cars and road congestion;
- Improving MRV capacities within the City and MoAEP on monitoring GHG and other emissions related to urban transport in Belgrade[6].

Recommendation 4: To sustain the development and operation of SUT measures in Belgrade, future assistance should also focus on identification of other revenue streams through an integrated "green cities approach" that will assist the Municipal Government in public transport subsidies. This could consist of a review of municipal expenditures to identify opportunities for municipal operational cost efficiencies. This could be achieved through a holistic approach to green urban development that may entail development of programmes for energy efficiency for municipal facilities (such as municipal buildings, water treatment plant and street lighting), renewable energy development (such as waste-to-energy and wind and solar generation facilities), district heating efficiencies, reducing water consumption, promotion of green construction and building materials, surface water management, and green infrastructure (i.e. urban parks forests and wetlands), all of which can provide cost savings to municipal operating budgets, and partial relief from subsidies into public transport. Realized municipal cost reductions may free up budgets that could augment infrastructure or operational funding for sustainable transport systems.

Recommendation 5: The time for GEF Projects between approval and implementation needs to be minimized to reduce the risks of reduced project influence. The STB Project suffered from a lag of 2 to the 3 years between the actual Project design (2008-09) and actual implementation (February 2011 Inception Workshop). While the Project was approved for implementation in March 2010, actual implementation did not commence until November 2010 February 2011 when a number of the original Project activities were already being implemented without Project assistance. As such, Project activities were changed to address their 2011 priorities in sustainable transport. This 13-month delay was due to the long process of recruiting a Project Manager. Improvements need be made to minimize the duration of the recruitment process for project personnel that should include pre-screening of candidates.

Recommendation 6: GEF should re-consider investment of its resources for sustainable transport projects under USD 2.0 million and less than 5 years in duration. If the purpose of GEF funds is to reduce transport-related GHG emissions, amounts less than USD 2.0 million have a higher risk of not achieving such a result. The risks are higher that there is insufficient time and fiscal resources to improve public transit services or to develop sustainable transport infrastructure such as a dedicated bus lanes, prioritized signalling for public transit vehicles, and a cycling network. The STB Project underwent significant changes at the Inception Workshop to transform the Project with overly ambitious targets (to be achieved within 4 years) to a Project with activities that could be supported by the USD 950,000 budget but with the possibility of having considerably less impact. By scaling down the activities, the STB Project was able to achieve its objectives within a 4-year period, if the effective Project period was considered to be November

[6] This would be consistent with the directions plotted by the Second National Communications for Serbia

2010, the start date of the PM to December 2014. The GHG reductions of these scaled-down activities, however, were small. If GEF wishes to have a sustainable transport project with more ambitious GHG reduction targets, a project with more resources and more time (more than 5 years) will be required.

Lessons Learned

Key lessons from the STB Project include:

- Thorough project preparations are essential for the setup of a successful sustainable transport project design and to minimize delays in implementation. This would include:
  - thorough stakeholder engagement, and most importantly, an understanding of the institutions to be involved with the project. Since sustainable transport projects are almost always politically motivated, assessment of the political risks is most important. Moreover, a sustainable transport should be planned to be in synchronization with the political cycle; this will minimize the time and effort required to familiarize new government officials with the project;
  - having access to stakeholder perspectives of urban transport, and determining their needs through questionnaires and surveys. No such information was collected in Belgrade. Such information and data collection could provide an improved understanding of travel demands within Belgrade. Disaggregation of this data could be made where appropriate into the various social groups whose travel patterns and needs may be distinct from other groups;
  - the collection of baseline information on traffic patterns and passenger volumes as well as vehicle energy consumption and usage patterns that could be achieved through the use of modernized traffic computer models (see Recommendation 2); and
  - enabling project designers and implementers to setup meaningful and achievable targets that would effectively measure project impacts.

- Mid-term evaluations need to be done at the mid-point of a Project; for a 4-year project, the latest a mid-term evaluation should take place is 2 years after its start. This is to allow the project an adequate amount of time to adaptively management implementation issues.

1. INTRODUCTION

This report summarizes the findings of the Terminal Evaluation Mission conducted during the November 17-21, 2014 period for the UNDP-GEF Project entitled: Support to Sustainable Transport for the City of Belgrade (hereby referred to as STB or the Project), that received a USD 950,000 grant from the Global Environmental Facility (GEF).

The Project was developed in 2007-08 by UNDP as a nationally executed (NEX) project (now referred to as National Implemented Modality or NIM). The Project Document (ProDoc) provides details to remove barriers to the reduction of GHG emissions from passenger transport systems in the City of Belgrade in the Republic of Serbia (SR). Project activities were changed from the original ProDoc during the February 2011 Inception Workshop to activities consisting of integrated land use and transport planning, cycling development, safe passage to schools for children, and "eco-driving" skills for public transit operators. The ProDoc was signed in April 2010 with actual Project activities commencing in November 2010, and a Project terminal date of November 30, 2014.

1.1 Background

Belgrade is the capital city of Serbia, with a 2014 population of 1.68 million and an estimated 0.45 million from surrounding suburbs who commute into Belgrade each day. The late 1990s marks a time when Serbia's economy was normalizing following the break-up of the former country of Yugoslavia. With a GDP growth rate of between 5.4% (2008) and 7.8% (2000) and a trend towards more liberal trade policies, personal incomes have risen in Serbia until 2008. Belgrade generates over 30% of Serbia's GDP with an average annual income per capita of USD 10,086. According to research conducted for SIDA, CO_2 emissions per capita in Serbia are estimated to be in the order of 6.2 tonnes per year, more than twice than the average in its income group[7]. Furthermore, with the decrease of CO_2 emissions in the EU, Serbia has emerged as one of the highest emitters of CO_2 per capita in Europe. In 1999, the Serbian transport sector accounted for 11% of total CO_2 emissions.

The economic growth of Serbia has given rise to a steady growth in the number of motor vehicles operating in Serbia, and more noticeably in Belgrade. Private car ownership in Belgrade has risen from 300,000 in 1990 to around 470,000 in 2010[8] that is equivalent to 313 cars per 1,000 inhabitants, just below the EU average of 350 cars per 1,000 inhabitants. It is also known that over 50% of these cars are older than 15 years. With traffic growth reaching unsustainable proportions in 2010, the City of Belgrade made a number of improvements to its public transport systems to mitigate these circumstances. With a lack of baseline information on transport usage, the unofficial figure on the modal split of public and individual transport is estimated to be in the order of 75:25 in 2014[9]. Despite this high usage of public transport in Belgrade, there are still congestion problems from the limited road space available in the City and pollution problems likely from fossil fuels used for urban transport and local power generation.

[7] Based on the assessment by Anders Ekbom and Emelie Dahlberg at the Environmental Economics Unit (EEU), Department of Economics, Göteborg University, as part of Sida-EEU's institutional collaboration on environmental economics and strategic environmental assessment

[8] Belgrade Statistical Yearbook 2010

[9] Personal communication from Belgrade Secretariat of Transport

The STB Project was formulated with the objective of reducing CO_2 emissions from road transport sector in the capital city of the Republic of Serbia, Belgrade. In line with GEF's OP11 and SP5 for Promoting Sustainable Innovative Systems for Urban Transport, the City of Belgrade indicated during the Project's Inception Phase of their ongoing strategy to meet these objectives through improving public transport services and urban transport infrastructure, implementing a city-wide parking strategy, and expressing their need for assistance for:

- preparing a "sustainable urban transport plan" (SUTP) that aligns with EU accession requirements;
- promoting the use of non-motorized vehicular (NMV) modes while in parallel making car use less attractive; and
- improving fuel consumption efficiencies of motor vehicles operating in Belgrade.

STB Project activities to address these transport issues included assistance in preparing the City of Belgrade for development of an SUTP; implementation of a cycling awareness raising campaign; promoting safe passage to schools for school children; and implementing a programme to reduce fuel consumption of public transit vehicles through "eco-driving" approaches.

1.2 Terminal Evaluation

1.2.1 Purpose of the Evaluation

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a Terminal Evaluation (TE) upon completion of implementation of a project to *provide a comprehensive and systematic account of the performance of the completed project by evaluating its design, process of implementation and achievements vis-à-vis GEF project objectives and any agreed changes during project implementation.* As such, the TE for this Project will serve to:

- promote accountability and transparency, and to assess and disclose levels of project accomplishments;
- synthesize lessons that may help improve the selection, design and implementation of future GEF activities;
- provide feedback on recurrent issues across the portfolio, attention needed, and on improvements regarding previously identified issues;
- contribute to the GEF Evaluation Office databases for aggregation, analysis and reporting on effectiveness of GEF operations in achieving global environmental benefits and on the quality of monitoring and evaluation across the GEF system.

This TE was prepared to:

⇒ be undertaken independent of Project management to ensure independent quality assurance;
⇒ apply UNDP-GEF norms and standards for evaluations;
⇒ assess achievements of outputs and outcomes, likelihood of the sustainability of outcomes; and if the Project met the minimum M&E requirements;
⇒ report basic data of the evaluation and the Project, as well as provide lessons from the Project on broader applicability.

The TE mission was fielded to Belgrade, Serbia between the 17th and 21st of November 2014. The Terms of Reference (ToRs) for the TE are contained in Appendix A. Key issues addressed on this TE include:

- Assessing the impact of the Project in light of substantial changes to the Project design made during the Inception Phase in February 2011;
- The achievability of GHG emission reduction targets as set by in the Project Planning Matrix (PPM) of February 2011; and
- The contribution of the Project to the sustainability of actual measures undertaken at the time of this Terminal Evaluation.

Outputs from this TE will provide an outlook and guidance in charting future directions on sustaining current efforts by the City of Belgrade to reduce its urban transport-related GHG emissions.

1.2.2 Evaluation Scope and Methodology

The methodology adopted for this evaluation includes:

- Review of project documentation (i.e. APR/PIRs, meeting minutes of PSC) and pertinent background information;
- Interviews with key project personnel including the Project Manager, technical advisors (domestic and international), and Project developers;
- Interview with relevant stakeholders from Government; and
- Field visits to selected project sites and interviews with beneficiaries.

A full list of documents reviewed and people interviewed is given in Annex B. A detailed itinerary of the Mission is shown in Appendix C. The Evaluation Mission for the UNDP-GEF project was comprised of one international expert.

1.2.3 Structure of the Evaluation

This evaluation report is presented as follows:

- An overview of Project activities from commencement of operations in March 2010;
- An assessment of Project results based on Project objectives and outcomes through relevance, effectiveness and efficiency criteria;
- Assessment of sustainability of Project outcomes;
- Assessment of monitoring and evaluation systems;
- Assessment of progress that affected Project outcomes and sustainability; and
- Lessons learned and recommendations.

This evaluation report is designed to meet GEF's "Guidelines for GEF Agencies in Conducting Terminal Evaluations, Evaluation Document No. 3" of 2008:

http://www.thegef.org/gef/sites/thegef.org/files/documents/Policies-TEguidelines7-31.pdf

The Evaluation also meets conditions set by the UNDP Document entitled "UNDP GEF – Terminal Evaluation Guideline" (http://erc.undp.org/resources/docs/UNDP-GEF-TE-

Guide.pdf) and the UNDP Document entitled "Handbook on Planning, Monitoring and Evaluating for Development Results", 2009:

(http://www.undp.org/evaluation/handbook/documents/english/pme-handbook.pdf)

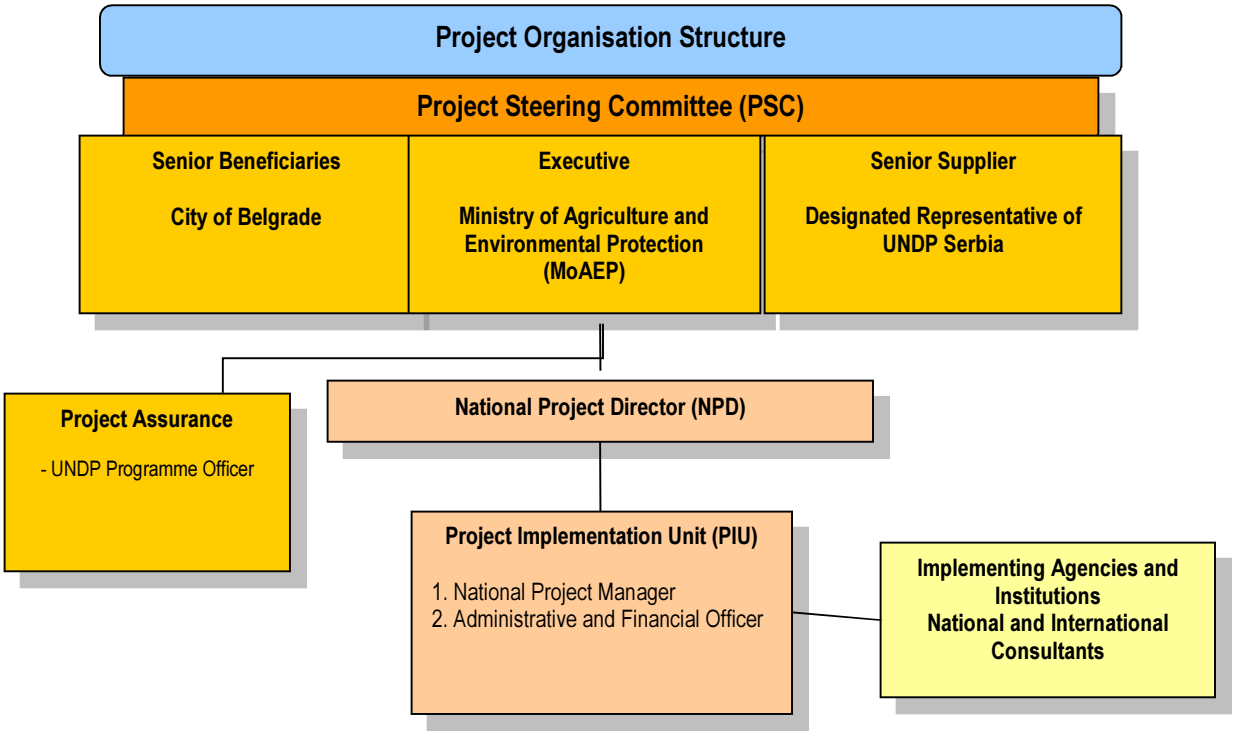
and the "Addendum June 2011 Evaluation":

http://www.undp.org/evaluation/documents/HandBook/addendum/Evaluation-Addendum-June-2011.pdf

1.2.4 Project Implementation Arrangements

Implementation arrangements for the STB Project were under national implementation modality (NIM) that involved UNDP Serbia as the Implementing Partner and the Ministry of Agriculture and Environment (MoAEP) as the Executing Entity and the City of Belgrade (CoB) as the Implementing Entity. An organogram of STB implementation arrangements is provided on Figure 1.

Figure 1: Management Arrangements for the "Support to Sustainable Transport in Belgrade" Project



2. PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT

2.1 Project Start and Duration

The STB project document (ProDoc) was signed on 21st April 2010 with an assumed 4-year duration. The actual Project operations, however, did not commence until February 2011, 13 months later with the Inception Workshop. The current termination date of the STB Project is 30th November 2014.

2.2 Problems that Project Sought to Address

The STB Project was designed specifically to reduce urban transport-related GHG emissions associated with the passenger transport system in Belgrade by about 17% in 2020 relative to 2007 levels, compared to a 47% increase in these emissions without any interventions. This would be achieved through various actions to mitigate the increasing use of carbon intensive modes of urban transport within the City of Belgrade. Given that the City was already undertaking its own actions in this regard, Project activities were re-scoped during the February 2011 Inception Workshop to assist the City in addressing their new priorities. This included actions to raise awareness of sustainable transport through cycling programs, programmes for safer passage for children to schools, and "eco-driving" skills for public transport drivers and truck drivers. These changes are discussed in more detail in Section 3.1.

2.3 Objectives of STB

Based on the new project planning matrix (PPM) approved by the PSC in February 2011, the objective of the STB Project was reset to "*reduce local and GHG emissions associated with the transport system in Belgrade while improving access"* with the following targets:

- a direct target of "*285,000 tonnes CO_2/year";* and
- GHG reductions associated with passenger transport system in Belgrade of 17% in 2020 relative to 2007 levels.

The revised STB log-frame is contained in Appendix F.

2.4 Main Stakeholders

The main stakeholders of the STB Project that were interviewed (unless otherwise noted) during the TE mission included:

- Ministry of the Agriculture and Environmental Protection (MoAEP);
- The City of Belgrade that includes the Land Development Agency, the Secretariat for Environmental Protection, the Secretariat for Transport, and the City's Public Transport Company (GSP);
- The Ministry for Construction, Transport and Infrastructure (MoCTI) - not interviewed;
- NGOs with roles on the various Project activities; and
- UNDP who served as the Implementing Agency of the STB Project.

2.5 Expected Results

To achieve the overall objective of reducing urban-transport related GHG emissions as defined in the new PPM (specifics mentioned in Section 2.3), the STB Project was re-designed for the removal of barriers with the following expected **Project outcomes** (based on the revised February 2011 PPM) that are shown on Table 1:

Table 1: Comparison of Intended Project Outcomes from ProDoc and Inception Report

Intended Outcomes in April 2010 ProDoc	Revised Outcomes in February 2011 Inception Report
Outcome 1: Integrated land use and urban transport planning at the metropolitan level. This would be achieved through the development of integrated land-use plans, formulating a working group on transport-land use planning, and hosting international conferences on EU and regional transport policies.	**Revised Outcome 1:** A completed planning process for launching the preparation of a Sustainable Urban Transport Plan (SUTP).
Outcome 2: Rationalizing parking regulations. This was to be achieved through the setup of a modernized parking system based on supply and demand and marginal cost pricing, and park-and-ride systems with cycling facilities.	**Revised Outcome 2:** Promotion of the cycling transport mode. This would be achieved through the preparation of cycling maps in Belgrade, preparation of a cycling website, conducting a cycling campaign “Let’s cycle in Belgrade”, and participation in European Mobility Week.
Outcome 3: Intelligent transport systems. This was to be achieved through setup of a public transport information center to direct schedules and dispatch, pilot programme for a high-occupancy vehicle (HOV) lane, and a pilot programme for car and taxi-sharing using mobile phones and social networking.	**Revised Outcome 3:** Safe and Sound to Schools. This would be achieved through training on safe and sound means of traveling to schools, study on school participation in the program, workshops with children on maintenance and repair of bicycles, and the completion of a cycling awareness campaign.
Outcome 4: Institutional transformation of government, businesses and general public to embrace sustainable transport. This would be accomplished through training on enterprise development for public transport operators, training to improve and synchronize taxi and other para-transit operations, capacity building for regulatory development, and case-study guide to replicate project elements.	**Revised Outcome 4:** Capacity Building. This would be achieved through training trainers on eco-driving for public transport drivers with the Public Transport Company in Belgrade (GSP), monitoring the impact of eco-driving training, and the completion of case studies from the Project on sustainable transport initiatives for wider dissemination to transport planners and other cities in Serbia.

3. FINDINGS

3.1 Project Design and Formulation

This section provides an evaluation of the STB Project design. Prior to the evaluation of the Project design, an overview of the preparatory phase and the events leading to the final design in the Inception Phase is provided:

- Project design activities commenced in 2007. At that time, the City of Belgrade had not worked with an international organization. Though the City recognized problems associated with increasing traffic congestion in Belgrade, it was unsure of next steps to undertake to mitigate the situation;
- The STB Project was prepared between 2007 and 2009. The general approach being adopted during this period was to improve public transport services in tandem with a parking strategy that would encourage less carbon intensive modes of transport. The 2-year project preparatory phase, however, was lengthy due to the fact there were 2 City Secretaries of Transport during this period. This required additional efforts by the Project preparation team to inform a new incoming secretary of Project preparation efforts;
- There were a number of sustainable transport concepts discussed in 2009 that were not included in the original ProDoc including:
  - Installation of a central dispatch center to monitor bus usage at strategic points around the bus network as well as HOV lanes. The City felt that the cost of this equipment was too high for the available GEF budget; and
  - A park-and-ride scheme. This was not approved by the City due to surveys indicating low usage of the scheme until public transit services improved to the extent that improved public transit services competed with the private car as a travel mode into the City center;
- Just prior to the submission of the ProDoc to GEF in late 2009, the incumbent Secretary of Transport expressed a need for more awareness of sustainable transport in Belgrade;
- The ProDoc was approved in March 3, 2010 based on 2008 information;
- Project LPAC meeting was conducted on March 23, 2010;
- Formal agreement between UNDP and the MoAEP (formerly known as the Ministry of Environment and Spatial Planning) was signed on April 21, 2010;
- The National Project Manager (NPM) commenced work on the STB Project in November 2010;
- Prior to the commencement of the Project, and between 2008 and 2010, the City had undertaken with their own resources a number of actions similar to those proposed in the original ProDoc including:
  - The successful implementation of a parking strategy in the Old City Center;
  - Improvements to public transit services including the construction and usage of dedicated lanes for public transit vehicles (i.e. buses and taxis) and the modernization of the public transit fleet; and
  - Construction of more than 60 kilometres of cycle paths during the 2006-10 period, mainly in New Belgrade (that is noted for its flat terrain) and along the river banks of the Sava and Danube;
- The Project's Inception workshop was held in February 2011. The City had stated that the Project with its USD 950,000 budget would not be able to make an impact towards the outcomes that were in the original ProDoc of April 2010. Furthermore, the City

had said that activities such as the parking regulations (old Outcome 2) and intelligent transport systems (old Outcome 3) were already being implemented, and that there was no incremental value for the GEF Project to become involved. As such, the City proposed that the Project funds be primarily used to raise awareness of sustainable transport including cycling, safe passage to school for children and eco-driving for public transit workers. They also confirmed their need for assistance to prepare for the formulation of a "sustainable urban transport plan" (SUTP);

- The Inception Report that summarized the discussions of the Inception Workshop was produced and served as the foundation for annual work plans of the Project moving forward. While a fair amount of detail was provided in the Inception Report for the new activities proposed (see Table 1), the report failed to address how the Project was going to generate GHG reductions from its activities nor did it address the issues of emission baselines from which GHG emissions reductions from the Project could be calculated;
- Lastly and most importantly, the Project has not addressed how it was going to achieve an unrealistic target of 285,120 tonnes CO_{2eq} per year by the end of the Project (EOP). The estimate of Belgrade's urban transport related CO_2 emissions was 449,490 tonnes CO_{2eq} from 2007 that was likely based on poor quality data; in 2007, there was not yet any precise and disaggregated transport GHG emissions data for the City of Belgrade. This may explain the unrealistic GHG emissions target of 285,120 tonnes CO_{2eq} per year. In the experience of the Evaluator, attaining this level of annual emissions from a sustainable transport project would require significant modal shifts from private car to public transport in 4 years[10]. With the Project budget of USD 950,000 spread over 4 years, this was not realistic.

3.1.1 Analysis of Project Planning Matrix

The February 2011 Project Planning Matrix (PPM) is consistent designs of other SUT projects, but reflective of the City's identified priorities. This PPM can be found in Appendix F. The City determined that the proposed activities should be commensurate with the Project of USD 950,000 which they felt would not be sufficient to meet the intended original outcomes of the ProDoc, namely affecting changes in integrated land use-transport planning, the use of HOV lanes, improvements in public transit services, and institutional strengthening. Given that the Project was starting one year later than planned, and that many of the improvements in public transit and HOV lanes were already taking place, this assessment on the use of Project resources appeared reasonable. Instead, they proposed the use of Project resources to meet their priorities that included:

- The planning process for the preparation of an SUTP;
- Promotion of cycling;
- Promotion of safe passage to schools for children; and
- Eco-driving training for public transit operators.

While the revised design was clear and well worded with the sole intention of promoting cycling, safe passage to schools and eco-driving techniques, it was never going to meet the

[10] To achieve an annual reduction of 285,120 tonnes CO_{2eq} would be equivalent to avoiding the use of petrol for 150,000 cars for a roundtrip of 26 km in the City of Belgrade for 220 days per year (assumed petrol consumption of 13 liters/100 km). There was no possibility of achieving this scale of intervention on the STB Project within a 4-year project; hence, this target was not realistic.

285,120 tonnes CO_{2eq} per year by the EOP defined in the ProDoc or achieve the 17% reduction relative to the 2007 GHG emissions of the City[11]. Moreover, the new indicators and targets were qualitative in nature and were output-based rather than being linked to the intended outcomes of the Project PPM; these do not meet SMART criteria[12] as required under GEF Terminal Evaluation Guidelines, making it difficult to assess the Project's contributions to the outcome objective of reducing GHG emissions. For example, there was an absence of SMART targets such as 25 drivers trained in eco-driving techniques by the mid-point, and 50 drivers by the EOP.

A set of new "objective" indicators and targets pertaining to GHG emission trends during the Project was proposed in the Inception Report of February 2011 where a "new" PPM was used to "reset" the Project. The new PPM indicators and targets, however, also did not meet SMART criteria as required under UNDP guidance for GEF Projects. The specific *objective targets* include:

- "Annual emissions during project period stay nearly constant or decline slightly in each project year" is not specific to what constitutes annual transport emissions (does this refer to all transport-related emissions in Belgrade?). This leads to some confusion over what emissions are to be actually measured, and the actual relevance of this indicator in relation to the proposed Project activities; and
- "Average daily commute time declines during project period - about 5% lower than 2007 levels by 2012 and about 10% lower by 2014" is also not sufficiently specific, and is likely not measureable given the lack of baseline commuting time data for 2007. This indicator also has little relevance to the promotion of cycling or safe passage to schools.

The original GHG emission reduction targets of 285,120 tonnes CO_{2eq} by the EOP was not mentioned in the revised PPM. As such, there were no Project indicators on the revised PPM to meet a specific GHG emission reduction target.

3.1.2 Risks and Assumptions

There is an extensive analysis of risks and assumptions in the revised PPM of the Inception Report that are mostly related to government willingness to continue with sustainable transport measures or the lack of participation or public confidence in the sustainable transport measures being undertaken. The risks and assumptions could have included:

- political risks from local elections resulting in delays from changes in government personnel, and their acceptance of policies and interventions. During the 2010-2014 duration of the Project, there have been 2 City and 2 national elections. During the 2008-10 period of the PDF-B Phase, there were two different Transport Secretaries for the City of Belgrade which lengthened the preparatory phase of the Project. These elections also delayed implementation of the Project, and created issues with regards to government ownership of the Project;
- awareness of the City and National Governments and the general public on sustainable transport was very low to the extent that various officials within the Belgrade Secretariat of Transport felt the need to change the Project design.

[11] Ibid 9
[12] Specific, measurable, achievable, relevant and time-bound

3.1.3 Lessons from Other Relevant Projects Incorporated into STB Design

No other relevant Projects are mentioned as contributing to the design of the STB Project. However, the Inception Report does acknowledge other UNDP-GEF sustainable transport projects in Slovakia and Tajikistan.

3.1.4 Planned Stakeholder Participation

Stakeholder participation was to be facilitated through the revised STB Project design activities including:

- Workshops to discuss SUTP content of Component 1 with City planners and the general public;
- Engaging cycling NGOs to promote cycling in Component 2;
- Involvement of the Ministries of Transport and Education as well as the schools in the Component 3 activities for safe passage to schools; and
- Involvement of bus operators of the Public Transport Company for Belgrade (GSP) for eco-driving skills under Component 4.

3.1.5 Replication Approach

The Inception Report provides a detailed description of the Project replication approach. With the funds available on STB, Components 2 to 4 were of the demonstration nature, designed to display the benefits of each sustainable transport measure and be replicated on a sustained basis. Output 4.3, “Case-study guide to aid replication of project elements” is the main activity to generate replication based on the preparation of Project activities and lessons learned on the Project.

3.1.6 UNDP Comparative Advantage

The comparative advantage of UNDP’s involvement on STB is its focus on long-term involvement and close collaboration with host governments and local stakeholders on the on sustainable transport and other climate change mitigation developments for developing countries. UNDP has undertaken a number of similar type projects that provide a focus on poverty alleviation and energy security. UNDP has a strong track record of developing local capacity, and effectively working with multiple stakeholders from public and private sectors, technical experts, civil society, and grassroots level organizations. In the context of sustainable transport development for Belgrade and other urban areas of Serbia, UNDPs approaches to these projects play to its strength including a multi-dimensional development perspective, and its ability to address cross-sectoral issues and inclusiveness in constituency building.

3.1.7 Linkages between STB Project and Other Interventions within the Sector

The STB Project design from the Inception Report identifies links with a number of national and local government initiatives including:

- the Initial National Communication (INC) to the UNFCCC in 2010 that contains information pertaining to the national GHG emissions from the road transport that will require “great efforts and the complete reorganization of the existing system with substantial and technological investments” reduce its growth;

- the *Sustainable Development Strategy* (2008) and the *National Environmental Protection Programme* (2010), both of which contain actions towards the mitigation of climate change. In particular, Serbia adopted its First Energy Efficiency Action Plan, which has set out short-term and long-term goals for final energy consumption reduction. The Plan covers the commercial and residential, transport and industry sectors with a long-term goal of reducing final energy consumption by 9.5% by 2018 compared to 2008; and
- *Economic Development Strategy of Serbia 2020*, which was drafted in 2010 to clearly define the priorities of further economic development by decoupling the economic growth and the carbon emissions through investments into rational use of energy and improving the energy efficiency.

Currently, there are other transport interventions in Belgrade that have some linkage with the Project. The following interventions were not mentioned in the Inception Report, possibly due to the fact that these initiatives had not commenced in February 2011:

- The Belgrade City waterfront project that is currently a priority for the City government;
- New bridges over the Danube and Sava Rivers with funding from the Chinese Government. The new bridge over the Sava River was completed in 2013 to ensure reduction of traffic congestion as well as reduction of CO_2 emissions in Old Belgrade and along the E75 highway corridor through Belgrade. This project was administered under the Belgrade's LDA; and
- Improvements in 2013 to the use of rail transport in the City between Ovca Train Station located to the northeast of the main City center to New Belgrade. The City of Belgrade made a €109.9 million investment using EBRD finance that has modernized urban rail transport in Belgrade. The new rail system serves the northern suburbs of Belgrade over the Pancevo bridge into Old Belgrade with a terminus in New Belgrade. The system is a contribution to the improved quality of public transport in Belgrade and an effort to reduce the usage of private cars; and
- The Transport Management Plan of the City of Belgrade from 2008 includes the expansion of road and parking infrastructure, bicycle lanes for recreational purposes and an increase in rolling stock for public transport (including buses, trams and trolleybuses). The Plan also includes growth in the transport system in Belgrade by improving capacities of both central and local institutions and facilitating a shift in demand centres to New Belgrade and elsewhere, and providing alternatives to private transport.

3.1.8 Management Arrangements

The original management arrangements of the STB Project consisted of the MoAEP (formerly the Ministry of Environment and Spatial Planning) as being the Executing Entity. MoAEP were then to appoint a National Project Director (NPD) to guide the establishment of a Project Implementation Unit (PIU) that would have included a Project Manager (PM) and a Project Team which can be assumed to consist of a Project assistant and the various short-term consultants or NGOs recruited by the PIU. The PIU would have been responsible for the day-to-day management and implementation of STB Project activities and a close working relationship with the Project Steering Committee (PSC), and be accountable to the MoEAP and the City of Belgrade for the planning, management, quality, timeliness and effectiveness of the activities carried out.

From a Project design perspective, this arrangement is similar to other projects globally under GEF where the host government has requested assistance from UNDP to implement a project, and was deemed appropriate.

3.2 Project Implementation

The following events and issues were significant in the context of how the STB Project was implemented:

- The substantive changes made to the Project outcomes and outputs from the ProDoc despite the fact that GEF project implementers are discouraged from making substantial changes to planned outcomes without discussion or approval from GEF. The changes made during the Inception Workshop resulted in the re-design and re-allocation of Project resources to fund new activities in cycling promotion, safe-passage to schools and eco-driving. This had an overall effect on reducing the GHG emission reduction ambition of the Project; and
- Numerous local and national elections that delayed critical decisions of the Project. This resulted in Project staff expending significant efforts in meeting with new officials and familiarizing them with the Project.

3.2.1 Adaptive Management

The activities proposed in the original Project design (as submitted to the GEF in December 2009 and approved in March 2010) were based on the Belgrade transport scenario in 2007 and 2008. Many of these activities were already being implemented during the February 2011 Inception Workshop. This included:

- A cycling study for Belgrade that was already prepared and being implemented during 2009;
- A management mobility centre that was established within the City Directorate for Public Transport;
- The completion of High Occupancy Vehicle (HOV) lanes for public transit vehicles;
- The installation of cameras installed at certain intersections in cooperation with the traffic police to ensure the enforcement of proper usage of HOV lanes;
- Improvements to public transit including the reconstruction and upgrade of axial tram lines in late 2010;
- Completion of cycling infrastructure with proper signalisation in New Belgrade;
- Zones on charged parking in the central area of Belgrade. The system is efficient, despite the criticism that the parking fees are too low. As such, there is insufficient incentive for citizens to change their transport modes from private cars to public transport, cycling or walking.

Additionally, at the time of the Inception Workshop, UNDP had to adaptively manage the following issues that did not have support from the City under the STB Project including:

- *Park and ride systems as pilot projects (original Outcome 2) that were being promoted by the Secretariat for Transport*. Surveys conducted by the City in 2009 indicated low public support for such a system as potential users felt a need for considerable improvements in Belgrade's public transport vehicles in terms of reliability, comfort and security, before they would consider using a park-and-ride system. The City had the

opinion that a lengthy development period and significant financial support would be required that would exceed the STB Project budget. As such, a decision was made that this SUT measure could not be supported with STB Project resources;
- *Car or taxi-sharing (a part of the original Outcome 3)*. The issue was the extensive infrastructural requirements to make the scheme operational including a sufficient length of HOV lanes for these vehicles. The PIU made the determination that the STB Project could not support this scheme since the construction of HOV lanes in the Old City was not possible within the short Project period;

The adaptive changes made to the Project design during the Inception Workshop introduced new designs for Outcomes 2 and 3, and reduced the number of activities originally proposed for Outcomes 1 and 4. Comparisons of the old and new outcomes can be seen on Table 1. There was no discussion, however, on how GHG emission reduction targets would be achieved in the new designs. This should have included activities on the collection of baseline information. Furthermore, there was no discussion of the fact that the GHG emission reduction target of 285,120 tonnes CO_{2eq} was in fact not realistic.

Exacerbating the situation, the PIU also worked under challenging conditions where over the 4-year duration of the Project, the PIU was required to work with two sets of counterpart personnel from the City's Transport Secretariat and Land Development Agency (LDA) as well as 2 administrations at MoAEP. The change of UNDP Project Managers during Year 3 of the Project only added to their management burden. The Project implementation period appeared to be out of step with the political cycle of change.

3.2.2 Partnership Arrangements

Planned stakeholder participation was refined during the Inception Phase involving the engagement of stakeholders from the CoB and the MoAEP during the Project as explained in Section 3.1.4 of this Report. This included:
- The use of workshops to involve City planners with the SUTP activities of Component 1, and the general public whose opinions were solicited during the SUTP process on various SUTP recommendations;
- Involvement of certain cycling NGOs to promote cycling in Component 2 which had resulted in a "Commission for Cycling" under the Belgrade Ministry of Transport where proponents are able to discuss plans for the increased cycling in Belgrade;
- Involvement of both the Ministry of Transport and the Ministry of Education as well as participating schools in the implementation of a programme for "safe passage to schools" under Component 3; and
- Involvement of bus operators of the Public Transport Company for Belgrade (GSP), two private bus companies as well as truck drivers of the City of Belgrade for eco-driving skills under Component 4.

The original intent of the Project was to involve a wide section of stakeholders as partners in supporting sustainable transport development in Belgrade (as outlined on pgs 10-11 of the ProDoc). However, the number of partnership arrangements resulting from this Project did not reach its target due to the reduced activities and scope of the Project. Partnerships were not developed with the Belgrade Institute of Public Health, and the Ministry of Economy and Regional Development (MoERD) as originally intended.

From the perspective of sustainability and replication of sustainable transport development, stronger partnerships with the Belgrade Institute of Public Health and MoERD would have been beneficial. Another issue on Component 2 (Cycling) was the failure of the Project to establish cooperation with two cycling NGOs who were not successful on the tender for the Project's cycling campaign.

Lastly, local ownership of the STB Project was problematic in that local City elections (three over the course of a 4-year project) often resulted in changes in counterpart personnel. This caused delays in Project implementation, a higher than anticipated effort to familiarize new officials with the Project, and a resulting poor corporate memory of the implementation of the STB Project.

3.2.3 Feedback from M&E Activities Used for Adaptive Management

Feedback for M&E activities has been provided through:

- QPRs that were regularly issued during the Project;
- PIRs and APRs from 2011 to 2014;
- PSC meeting minutes; and
- The Mid-Term Evaluation (MTE) report from May 2013.

These reports contained the details for monitoring revised Project activities and recommending adaptive management measures to ensure efficient implementation of the revised Project designs. These reports contain an adequate amount of detail on how the Project was implemented; however, the reports do lack detail on monitoring GHG reductions from all activities. The Project did recruit a GHG monitoring consultant to determine GHG baselines and summarize the GHG reduction benefits generated from the Project; this was done in mid-2014, however, too late in the Project to contribute to any adaptive management measures that would work towards GHG targets.

The MTE report is also considered feedback for adaptive management of the Project. It contained 15 recommendations to strengthen project implementation and adaptive management of the Project. Unfortunately, the PIU had less than 20 months to act on these recommendations. While efforts were made to respond to less than 5 of these recommendations[13], there was insufficient adaptive management effort on the part of UNDP Serbia to respond to the other 10 recommendations. This type of response may have been a result of a lack of time for PIU personnel to follow-up (due to significant time spent by PIU familiarizing new City and Government personnel on the Project), and the lack of budget (more than 80% of the budget was expended by June 30, 2013, just after the MTE Report was issued).

[13] This included the hiring of a GHG expert for estimation of direct GHG emissions reductions, recruitment of the former NDP as the new Project Manager (after November 2013), upgrading of the Belgrade cycling website onto the City's main sustainable website,

3.2.4 Project Finance

STB had a GEF budget of USD 950,000 that was utilized over its 57-month duration, managed by the PIU under a "DIM modality" [14] and approval by the PSC for various technical assistance activities, workshops, and conducting technical studies for the various pilot SUT initiatives.

Table 1 provides an overview of expenditures of the GEF Project budget of USD 950,000 from April 2010 to November 2014. *The cost effectiveness of the Project has been moderately unsatisfactory* in consideration of the failure to reach the direct GHG emission reduction target of 285,120 tonnes CO_2 per year. Furthermore, the issue of this target not being achievable (as discussed in Section 3.1.1) was not properly addressed during Inception Workshop. Project management costs incurred by the PIU to implement the Project were in the order of 10% of the overall budget.

With regards to co-financing, the Evaluator is in strong agreement with the MTE assessment that there is only a vague definition of co-financing that can be "claimed" by this Project, and the resulting lack of activity to monitor co-financing on this Project. Co-financing of USD 3.299 million is credited to this Project on the basis of 2011-12 expenditures by the Transport Secretariat traffic signalization, parking regulations, raising public awareness, and Belgrade LDA carry-on work during 2013 on the update and second phase of the SUTP Belgrade preparations. The Project should take some "co-financing" credit for the construction of 37 km of renovated cycle paths and 4 km of new cycle paths in Old Belgrade, and for traffic claiming measures at 40 more schools in Belgrade. In addition, the City has said that the STB Project had raised their own awareness of sustainable transport which they have started incorporating into their plans and designs. The co-financing figures from these "in-kind" activities, however, were not reported.

The City of Belgrade, however, did report on capital investments between 2011 through to 2013 in the order of USD 23.75 million that were various capital cost projects that improve traffic flow efficiency[15]. While these investments did have strong links with the original STB Project design in the ProDoc, they do not have strong links with the new components of the Project including cycling, safe passage to schools and eco-driving. In addition, these investments would have occurred without the STB Project, and as such, the STB Project should not consider these investments as co-financing contributions. Co-financing details can be found on Table 2.

[14] The Project Manager of the STB Project also served as "Portfolio Manager for Climate Change" for UNDP Serbia, and was not a full-time officer of the STB Project. Hence, while MoAEP chaired and made project decisions through its NPD, the PIU operated under UNDP Serbia and executed the STB Project. The last PM of the Project (after November 2013) also served as the NPD for the Project in 2011 and 2012. The Project office was maintained within the premises of MoAEP during 2014.

[15] Includes a) Adaptable traffic management system on the ICSRR Corridor, section from Tosin Bunar St to Hypodrom Interchange with accompanying roads (USD 10.625 million); and b) construction of new tramway line across the bridge at Ada over the River Sava and associated approach roads (USD 13.125 million).

Table 1: GEF Project Budget and Expenditures for STB Project (in USD as of November 30, 2014)

Outcome / Year	2010-2011	2011-2012	2012-2013	2013-2014	Total Disbursed	Total Planned for Project	Total Remaining
Outcome 1: SUTP	84,159	109,557	42,658	2,000	238,374	200,000	(38,374)
Outcome 2: Cycling Promotion	55,589	90,234	23,482	68,000	237,305	200,000	(37,305)
Outcome 3: School children pedibus	14,715	145,732	18,901	82,200	261,548	265,000	3,452
Outcome 4: Eco-Driving	1,914	38	98,335	17,500	117,787	190,000	72,213
Project Management Unit	69,601	16,773	479	8,133	94,986	95,000	14
Total (Actual)	225,979	362,333	183,856	177,833	950,000	**950,000**	**(0)**
Total (Cumulative Actual)	225,979	588,311	772,167	950,000			
Annual Planned Disbursement	275,840	289,720	210,220	174,220			
% Expended of Planned Disbursement	**82%**	**125%**	**87%**	**102%**	Total exenditure till date - - >		100%

Table 2: Co-Financing for STB project (as of November 30, 2014)

Co-financing (type/source)	UNDP own financing (million USD)		Government (million USD)		Partner Agency (million USD)		Private Sector (million USD)		Total (million USD)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants		0.020[28]		3.299[29]	-	-				3.299
Loans/Concessions					-	-				
• In-kind support			6.502[30]	0[31]					6.502	0
• Other										
Totals			6.502	3.299					6.502	3.299

[28] For research paper into the safety aspects of two-wheeled transport in Belgrade

[29] This includes expenditures from the Transport Secretariat during 2011-12: traffic signalization (USD 1.6 million), parking regulations (USD 426,000) and raising public awareness (USD 773,000), and from the LDA during 2013: Transport Master Plan of Belgrade including the update and second phase of the SUTP Belgrade preparations from an EBRD grant (USD 500,000).

[30] This included USD 4.243 million from the City of Belgrade and USD 2.259 million from the City's Land Development Agency

[31] No in-kind contributions were reported although the Evaluator is aware that there were in-kind contributions made to the Project by personnel from the City of Belgrade's Transport Secretariat, GSP and LDA as well as MoAEP.

3.2.5 M&E Design at Entry and Implementation

As mentioned in Section 3.1, outcome changes were made to the Project design during the Inception Workshop in February 2011 due to the fact that many of the activities proposed by the ProDoc from 2008 were already being implemented. As discussed in Section 3.1.1, the City identified activities during the Inception Workshop that were in line with their updated priorities and commensurate with the available Project budget. Most of these activities were aimed primarily to raise awareness of sustainable transport modes in Belgrade.

There were significant shortcomings in the M&E design involving indicators that do not meet SMART criteria (see Section 3.1.1 for details). Despite the lack of baseline information on cycling usage and travel modes to schools, participants at the Inception workshop provided indicators in the new PPM that were based on the outputs rather than the intended outcomes of reducing transport-related GHG emissions. Specific examples of these indicators on the new outcomes include:

- a baseline assumption in Component 2 that there was no awareness of cycling as an alternative transport mode to the private car or cycling travel modes to schools for children. No target, however, was provided for the number of cyclists in Belgrade at the mid-point and end of project;
- a baseline assumption for Component 4 of the lack of awareness of eco-driving. There were no indicators, however, provided on any fuel consumptive data at the Public Transit Company (GSP) where GHG targets could have been estimated;
- "targeted outputs" include cycling maps and a website for Component 2, and study on school transport, children's workshops on safe passage to schools for Component 3.

Given that the primary goal of most GEF Climate Change mitigation projects is to reduce GHG emissions, *the M&E design at the entry point of the Project has been rated unsatisfactory* due to the lack of SMART targets for GHG reductions. Exacerbating this issue was the acceptance of the PPM by MoAEP, the City of Belgrade and UNDP Serbia during the Inception Workshop. As such, the M&E Plan was executed as designed in Appendix F with QPRs and annual progress reports providing qualitative descriptions of issues confronting the Project including progress, risks and follow-up actions. However, there were no adjustments made to improve GHG reduction monitoring. As such, *the rating for M&E plan implementation is rated moderately unsatisfactory*. Ratings according to the GEF Monitoring and Evaluation system[32] are as follows:

- *M&E design at entry – 2;*
- *M&E plan implementation – 3.*

3.2.6 Performance of Implementing and Executing Entities

The performance of MoAEP as the Executing Entity on this Project is rated satisfactory. The role of MoAEP as the Executing Entity on this Project was to provide the guidance and

[32] 6 = HS or Highly Satisfactory: There were no shortcomings;
5 = S or Satisfactory: There were minor shortcomings,
4 = MS or Moderately Satisfactory: There were moderate shortcomings;
3 = MU or Moderately Unsatisfactory: There were significant shortcomings;
2 = U or Unsatisfactory: There were major shortcomings;
1 = HU or Highly Unsatisfactory.

Government support and raising the profile of the STB Project. There were three NPDs assigned from MoAEP to this Project for its entire duration. Their involvement on the Project was positive in their undertaking of initiatives and proposing actions to address a number of climate change related issues during the STB Project including:

- The need for technical assistance support from outside agencies to develop SUTPs and SUMPs;
- The need to raise awareness within the MoAEP and other national government agencies of climate change issues that can be incorporated into their strategic development documents;
- Undertaking a climate change review of the transport sector in Serbia involving the national Ministry of Construction, Transport and Infrastructure (MoCTI) to raise their awareness of climate change related issues in the transport sector;
- Ongoing MoAEP efforts in preparing a GHG inventory on a UNDP/GEF project support-basis with the aim to have this inventory evolve into a national GHG inventory system. They also identified the need for technical assistance for the preparation of transport-related GHG inventories;
- The preparation of Serbia's Second National Communication (SNC) and Biennial Report that will provide support for improved MRV capacity within MoAEP.

The performance of City of Belgrade as the Implementing Entity is ranked as moderately satisfactory. At the commencement date of STB in February 2011, the City had already demonstrated its commitment to sustainable transport development of the Project through its implementation of a parking strategy in the Old City Center (with the assistance of EU) to improvements in public transport with dedicated lanes for public transit vehicles, and the completion of several kilometres of cycle paths mainly in New Belgrade and along the river banks of the Sava and Danube. The City undertook a proactive stance in re-shaping the activities of the STB Project through the inclusion of their sustainable transport priorities that could be supported with the GEF funds of USD 950,000. Notwithstanding these commitments, the frequent changing of counterpart personnel (two changes during the Project period) resulted in:

- more time and effort required to familiarize new personnel to the efforts of the STB Project;
- slower implementation of STB Project activities; and
- poor development of corporate memory of sustainable transport development within the City of Belgrade.

The performance of the implementing partner, UNDP, is ranked as moderately unsatisfactory. The primary reasons for this rating are:

- The provision of an ambitious Project design with a GHG reduction target that was not realistically achievable. This GHG target was designed towards failure of the Project;
- Adaptive management was not fully applied on behalf of UNDP during the Inception Phase on resetting of activities to meet GHG reduction targets and setting up SMART indicators for the PPM;
- Not holding the mid-term evaluation until almost three years or 75% of the Project period had elapsed with 81% of the STB Project budget expended leaving limited time and budget for adaptive management;
- The change of Project Manager only one year before the end of the STB Project that added to the difficulties of adaptively managing the Project; and

- The ability of the UNDP Serbia to overcome the numerous changes in counterpart personnel at the national and municipal levels of government, and to be able to build relationships with the relevant government officials under trying circumstances. Given the budget of the Project, the PIU was left with fewer resources to implement the STB Project and raise awareness of sustainable transport measures in Belgrade.

Ratings of the Project's Implementing and Executing agencies are as follows:

- *National Executing Entity (MoAEP)* - 5;
- *National Implementing Entity (City of Belgrade)* – 4; and
- *Implementing partner (UNDP)* – 3.

3.3 Project Results

Assessment of Project achievements and shortcomings are provided in this section against the revised February 2011 Project log-frame. Each outcome was evaluated against individual criterion of:

- *Relevance* – the extent to which the outcome is suited to local and national development priorities and organizational policies, including changes over time;
- *Effectiveness* – the extent to which an objective was achieved or how likely it is to be achieved;
- *Efficiency* – the extent to which results were delivered with the least costly resources possible.

The Project outcomes were rated based on the following scale:

- *6: Highly Satisfactory (HS)*: The project has no shortcomings in the achievement of its objectives;
- *5: Satisfactory (S)*: The project has minor shortcomings in the achievement of its objectives;
- *4: Moderately Satisfactory (MS)*: The project has moderate shortcomings in the achievement of its objectives;
- *3: Moderately Unsatisfactory (MU):* The project has significant shortcomings in the achievement of its objectives;
- *2: Unsatisfactory (U)* The project has major shortcomings in the achievement of its objectives;
- *1: Highly Unsatisfactory (HU):* The project has severe shortcomings in the achievement of its objectives.

3.3.1 Overall Results

Project Goal: Create a sustainable transport system in Belgrade

Project Objective: Reduce local and greenhouse gas emissions associated with the transport system in Belgrade while improving access.

Intended EOP Outcome:
⇒ Total CO_{2eq} emission reductions of 17% in 2020 relative to 2007 levels associated with an improved passenger transport system in Belgrade compared to a 47% increase in these emissions. This is equivalent to direct total CO_{2eq} emission reductions of 285,120

tonnes CO_{2eq}/year and indirect CO_{2eq} emission reductions of 71,000 tonnes CO_{2eq}/year by the EOP; ⇒ Annual emissions during Project period stay nearly constant or decline slightly in each project year; ⇒ Average daily commute time declines during project period. It is about 5% lower than 2007 levels by 2012 and about 10% lower by 2014.
Actual EOP Outcome: ⇒ *An unsatisfactory outcome has been achieved since direct CO_2 emission reductions is 744 tonnes CO_{2eq}/year, short of the target of 285,120 tonnes CO_{2eq}/year, and 9,610 tonnes CO_{2eq}/year, short of the target of 71,000 tonnes CO_{2eq}/year. This is primarily due to the targeted outcome of 285,120 tonnes CO_{2eq}/year being very large and unrealistic[33];* ⇒ *A moderately unsatisfactory outcome has been achieved with constant or decline in annual emission reductions in each year of the Project. This is seen as an unrealistic target that could never have been achieved through this Project and its small budget of USD 950,000. In addition, there is no in-country capacity to measure this indicator in the City of Belgrade;* ⇒ *A moderately unsatisfactory outcome has been achieved with the indicator on declining commute times. The indicator itself is flawed in that it is difficult to measure the average daily commute time for all commuters of Belgrade. Based on the Project activities, the relevance of this indicator is also questionable.*

Rating: *relevance: 3*
effectiveness: 3
efficiency: 2
overall rating: 2.7

Table 3 summarizes the GHG reduction estimates (using GEF guidelines) that are estimated from STB outcomes. These estimates follow TEEMP methodology principles for estimation of the GHG mitigation impact of the transport project activities. The TEEMP methodology is intended to provide uniformity to the calculations and assumptions used to estimate the GHG impact over a very diverse array of GEF sustainable transport projects. Wherever deemed appropriate, estimates from the TEEMP methodologies were compared with estimates from GCP and COPERT models to provide more reliable and realistic GHG emissions estimates to evaluate Project activities.

The process of calculating GHG reductions for the STB Project included 4 separate calculations for the 4 different components. This included a determination of direct GHG emission reductions (GHG reductions during the Project period) and lifetime direct GHG reductions (GHG reductions during the Project period plus GHG reductions after the EOP for a 10-year GEF influence period). A summary of GHG reductions from each of the 4 components is provided on Table 4. Details of these GHG reduction estimates are provided as follows:

[33] Ibid 9

Table 3: Summary of CO_2 Reductions from the Project

Emission Description		Actual	Target
Direct emission reduction due to Project activities, t CO_2		744 [34]	285,120[35]
Direct post-project emission reduction[36] due to Project activities, t CO_2		0	0
Indirect emission reduction due to Project activities, t CO_2:	Top-down[37]	96,104	710,000[38]
	Bottom-up[39]	63,000	
TOTAL EMISSION REDUCTIONS DUE TO UNDP-GEF PROJECT, t CO_2		**159,848**	

Table 4: Estimated GHG mitigation potential by Project component (kilotonne CO_{2eq})

Year	Component 1: SUTP (kt CO_{2eq})	Component 2: Let's Cycling in Belgrade (kt CO_{2eq})	Component 3: Safe Passage to Schools (kt CO_{2eq})	Component 4: Eco-driving in public transport companies (kt CO_{2eq})	Total mitigation potential of all 4 components (kt CO_{2eq})
2011	NA	NA	NA	NA	**NA**
2012	NA	0.050	NA	NA	**0.050**
2013	NA	0.281	0.003	0.012	**0.296**
2014	NA	0.566	0.006	0.172	**0.744**
2015	NA	0.632	0.006	2.828	**3.466**
2016	4.251	0.706	0.007	4.801	**9.765**
2017	8.706	0.783	0.007	5.268	**14.764**
2018	13.436	0.868	0.007	5.341	**19.652**
2019	18.432	0.957	0.007	5.414	**24.810**
2020	21.652	1.055	0.007	5.487	**28.201**
2021	22.532	1.166	0.007	5.560	**29.265**
2020	23.427	0.128	0.007	5.633	**29.195**
2023	24.304	1.406	0.007	5.706	**31.423**
2024	25.175	1.533	0.007	5.779	**32.494**
Total cumulative direct GHG emission reductions 2012 – 2024					**224.125**

[34] This is the total of GHG reductions for the year 2014 as shown on Table 4

[35] This is 285,120 tonnes CO_{2eq} per year at EOP date of 2014

[36] These are cumulative GHG reductions for a 10-year period after the EOP generated from sustainable transport initiatives financed by revolving funds setup from GEF resources. No such funds were setup by STB.

[37] Top-down emission reductions were calculated using the cumulative 10-yr GHG potential of 240,260 tonnes CO_{2eq} figure that was derived from an annual reductions of 0.026 kt CO_{2eq} per year from mitigation potential of the integration of the "Pedibus" programme with schools similar to the St. Sava Primary School pilot, 4 kt CO_{2eq} per year from eco-driving techniques in the city of Belgrade road transport sector (including commercial and heavy duty vehicles in Belgrade), and 20 kt CO_{2eq} per year from possible establishment and implementation of integrated city transport management and control system as part of the SUTP of Component 1. The causality factor was assumed to be 40% based on the strong drivenness of the City towards sustainable transport development, the approval of an EU-grant and implementation of SMART measures for a Belgrade SUMP, and ongoing expenditures for sustainable transport infrastructure and new rolling stock (i.e. trams, buses and trolley buses) for improved public transport services.

[38] This target is cumulative over 10 years x 71,000 tonnes CO_{2eq} per year.

[39] The possible "bottom-up" project replications include the cities Nis and Novi Sad, as cities similar in range and infrastructural management. Based on the population data of these cities, possible project replication in the city of Nis would bring urban transport sector GHG emission reductions of approximately 2.7 kt CO_{2eq} per year. Using the same estimation approach for the city of Novi Sad, the potential GHG emission reductions are in the order of 3.6 kt CO_{2eq} per year. Total bottom-up GHG emission reductions would be 6.3 kt CO_{2eq} per year or 63 kt CO_{2eq} over a 10-year influence after the EOP.

- *Component 1 – Preparation of the SUTP/SUMP*: The Project's assistance on this component (as detailed in Section 3.3.2) has contributed to the adoption, preparation and implementation of a SUMP for Belgrade. As such, GHG emission reductions can be claimed after the EOP. The modelling methodology of the GHG impact of this component is based on the assumption that after 5 years of the commencement of SUTP implementation in 2020, 1% of the urban road transport emission reduction will be achieved, with a progressive penetration rate during the period of 2016-2020.

  The European practice for GHG reductions from SUTP preparations studies estimate higher emission reduction rates of approximately 6% from the implementation of SUTPs[40]. Since the SUTP/SUMP preparations for the city of Belgrade are now in early implementation phases until 2016 or 2017, a conservative value of 1% GHG reduction by 2020 was deemed to be more realistic and was used in the estimation of the mitigation potential of this component;

- *Component 2 - Cycling Promotion*: The GHG reduction estimates from cycling were expectedly small. The estimation of the GHG emissions reduction potential was done with usage of the survey data for baseline bicycle usage (done during the Project) and conservative penetration rate of the modal switch, which was estimated according to Project interventions and activities, the national and local circumstances and the EPOMM Evaluation Tool that is based on real monitoring of the GHG emission reductions from transport interventions. The GHG reduction estimates are based on 37 km of renovated bicycle tracks and 4 km of newly constructed cycle paths in Old Belgrade[41]. The mitigation potential of this cycling component assumes a realistic breakthrough rate of a 10% increase of cycling amongst commuters by 2014, followed by an increase in modal shift rate of 0.33% for the period 2015 - 2020. The average commuter is assumed to be a bicycle 175 days per year with an average trip distance of 2 km;

- *Component 3 - Safe Routes to Schools*: Survey data from the Project activity was used to estimate GHG emission reductions from the motorized modes to walking to school. The survey revealed that 20% of the pupils are driven to the school in a vehicle that is an average of 13 years old with a Euro 3 standard and an average distance of 1.5 km in one direction. As expected, the GHG emission reductions are also small from this activity;

- *Component 4 - Eco-driving in public transport companies*: The emissions reduction potential from this component was estimated through the TEEMP model for eco-driving for its direct impact on transportation efficiency, GSP's eco-driving training programme plans and the recorded fuel consumption reductions by GSP drivers under the Project's training activities from late 2013 to the EOP. The emission reduction estimates compare favorably to the GSP estimates of saving 4.5% of the 93,000 liters of diesel consumed each day in the fossil-fuelled bus operations of GSP.

[40] These are reductions for the similar project implemented in period of 10 years under the European Platform on Mobility Management (EPOMM) reports and evaluation guidelines reports.

[41] Over 60 km of cycle paths were constructed in New Belgrade between 2006 and 2008. According to City officials, the use of these cycle paths was very low (despite the fact New Belgrade has flat terrain), and were only used for recreational purposes and not for commuting. Prior to this Project, there were no cycle paths in Old Belgrade that were useable (Old Belgrade is more hilly and more challenging for recreational cyclists). Upgrading of old cycle paths and the construction of new cycle paths in Old Belgrade occurred in 2012 and 2013 after the cycling campaigns.

In conclusion, the overall rating of Project results is moderately unsatisfactory. The primary reason for this rating was failure to achieve any significant GHG emission reductions and the lack of recognition that the original GHG targets that were not achievable. Although the Project has generated 744 tonnes CO_{2eq} in 2014 as direct GHG reductions, these were far below the target of 285,000 tonnes CO_{2eq}/year at EOP.

3.3.2 Outcome 1: Integrated land use and urban transport planning at the metropolitan level

Intended Outcome 1*:* ⇒ Development of integrated land-use/transport plans, with mixed use, high-density zoning along major transport corridors, discouraging low-density, automobile dependent development at the urban fringe ⇒ Working group on transport and land-use planning, with external consultations on transit corridor planning ⇒ International conference on EU transport and regional policies with regard to the sustainable urban development and mobility hosted in Belgrade
Actual Outcome 1: ⇒ *A moderately satisfactory outcome was achieved with the completion of a "planning phase" for the preparation of a Sustainable Urban Transport Plan (SUTP)[42] for Belgrade. With the completion of a number of STB Project reports on various aspects of the how the plan is to be prepared, the Belgrade Land Development Agency (LDA) is in a position to prepare an SUTP. They have confirmed an EBRD grant (€400,000) plus City funds are available to implement Phases II, III and IV of the SUTP. Any follow-up on preparing the ToRs for the SUTP will need to incorporate the recommendations of the MTE which include the need for comparisons of SUTP preparation experiences from other cities in Europe, particularly in the United Kingdom, France and Belgium;* ⇒ *A moderately satisfactory outcome has been achieved with formation of a working group on cycling and other sustainable transport options. Working group discussions are focused around inputs into draft laws on safety;* ⇒ *A satisfactory outcome has been achieved through the completion of a two-day international conference entitled "Sustainable Urban & Transport Planning" in Belgrade in May 2013 attended by more than 200 local and international delegates and experts.*

Rating:	*relevance:*	*5*
	effectiveness:	*4*
	efficiency:	*5*
	overall rating:	*4.7*

Outputs from this Component were numerous consisting of a number of reports that has an important impact of raising awareness and knowledge amongst LDA personnel of the long and extended efforts required to prepare a SUTP or SUMP[43] under EU guidelines. These reports prepared by an international consulting firm from Portugal (Parque Expo) assist the LDA in their comprehension of the efforts and resources required to complete an SUMP. This would include reviews of the legal and political framework, capacity assessment of the LDA and other agencies in the City, assessment of financial resources required, proposed work plans for subsequent phases of the SUMP, and preparation of the communication plan

[42] SUTPs are often referred to as SUMPs or Sustainable Urban Mobility Plans. Both acronyms are used interchangeably throughout this report

[43] Ibid 41

for the SUMP. These activities also highlighted the importance of the collection of relevant information through surveys as the basis for a new transport models for Belgrade. This would be done and built upon the public transit model developed under the Belgrade Master Transport Plan of 2008[44].

The Evaluator, however, also is in agreement with the MTE findings that these reports could have provided more emphasis on the importance of integrating land use and transport planning as a means of inducing transport modal changes and a cultural change in approaches towards resolving urban transport issues. The MTE provides further guidance in this regard by recommending a review of SUMP preparations by countries with more SUMP experience such as those in the U.K., France and Belgium. With some slight revisions to the SUMP work plans for Belgrade, a proper assessment can be made of the local capacity available to prepare a Belgrade SUMP. The contribution of Project resources for the planning phase of the SUMP has been vital to its continuation; the City of Belgrade is currently undertaking the next phase of the SUMP development with its own finances and an EBRD grant of USD 500,000 that includes updates on the City's street and road network, data collection of trips taken, calibration of city transport model, SMART measures of SUTP, and update of action plans to support SUTP.

3.3.3 Outcome 2: Promotion of the cycling transport mode

Intended Outcome 2*:* ⇒ GPRS cycling maps to facilitate and stimulate the use of bicycles throughout the City; ⇒ A cycling web-site to serve the cyclists on cycling-related information and knowledge; ⇒ Cycling campaign "Let's cycle in Belgrade" to raise awareness of cycling opportunities in Belgrade not only for recreational purposes but also as a transport mean throughout the city; ⇒ Participation in European Mobility Week to demonstrate Belgrade's commitment on sustainable urban mobility and climate change.
Actual Outcome 2: ⇒ *A satisfactory outcome has been achieved with the distribution of pocket-sized cycling maps at promotional cycling rides;* ⇒ *A satisfactory outcome has been achieved with a cycling website that provides an excellent overview of cycling in Belgrade and its societal benefits: http://www.biciklirajbeogradom.com/eng/;* ⇒ *A satisfactory outcome has been achieved with a "Let's cycle in Belgrade" campaign to raise awareness of cycling not only as a recreational activity but also as a means of transport throughout the City. These events were also held at primary and secondary schools and included debates on the merits and demerits of increased cycling activities in Belgrade. These events provided an opportunity for data collection of cycling activity and popularity throughout Belgrade disaggregated into age and income groups (as summarized in the Masmi report of March 2014. One issue still to be overcome is the perception of cycling safety which still prevents a certain sector of Belgrade residents from participating in cycling;* ⇒ *A satisfactory outcome has been achieved with the participation of Belgrade in all European Mobility Week events from 2011 to 2014 to promote cycling as an alternative mode of transport. Over this period, the number of participants on promotional rides has increased dramatically up to 2014.*

[44] As prepared by the Faculty of Transport and Traffic Engineering at the University of Belgrade

Rating:	*relevance:*	*4*
	effectiveness:	*5*
	efficiency:	*5*
	overall rating:	*4.7*

The activities of this component were revised from activities on "rationalizing parking regulations" through the setup of a modernized parking system and the setup of park-and-ride facilities. While park-and-ride facilities would generate significant GHG reductions from avoided use of fossil fuels from private car trips, the "revised" activities were scaled down to the promotion of cycling in Belgrade that would generate significantly smaller GHG emission reductions. While this component did address one of the City's sustainable transport priorities, there is weak relevance of this component with GHG reductions, and the relevance of this component is rated only moderately satisfactory.

The baseline of this component was the development of over 60 km of cycling paths mainly in the flat areas of New Belgrade, and the usage of these cycling lanes mainly for recreational purposes. This component was re-designed to change the perceptions of cycling through a series of actions designed to raise the profile of cycling as an alternative means of urban transport. To this extent, the success of activities of this component has resulted in large increases in the number of cycling participants at all the cycling promotional events in Belgrade, and a general increase in the popularity of cycling in Belgrade as an alternative means of urban transport.

This has catalyzed the City's Secretariat of Transport and its Commission for Cycling into investing in the development of cycling lanes by the City in Old Belgrade where hilly terrain serves as an additional challenge to cyclists. To this end, the City of Belgrade developed 41 km of cycling corridors on Avala Mountain and Bojcinska Forest. The Project provided support to the City on cycling by donating more than 40 cycles to the the MoAEP and the City for promotional purposes and materials for signage and markings for proper cycle crossings in Old Belgrade. Moreover, the City facilitated dialogue with the cycling community (as represented by various cycling NGOs) on strategic directions for developing cycling in Belgrade.

A notable development from these discussions was the need for additional cycling lanes and corridors in Old Belgrade where streets are narrow with too many cars. Since road space cannot be increased in Old Belgrade (due to the need to remove old and established buildings), the need for reducing the number of cars in Old Belgrade could only come from the pedestrianization and making some of the corridors more friendly to cyclists. As an initial move to catalyze cycling in Old Belgrade, the City has designated some of the streets in Old Belgrade with 30 kph speed limits with rights-of-way given to pedestrians and bicycles; the intention is to evolve these corridors into pedestrian and cycling corridors in the near future. There are also plans and construction projects in the City to provide a bike lane on Boulevard Oslobodtenja as a demonstration of multi-modal use of road space in Old Belgrade. This pilot project would also include the availability of rental cycles and ample and secure parking spaces for bikes. The City has ongoing dialogues with Vienna and Lyons on their experiences in developing cycling lanes and multi-modal corridor use for urban transport.

Another development from these discussions has been the need to improve the regulatory regime for cycling safety in Belgrade. A research paper that was financed by the Project along with a co-financing contribution from UNDP provided a basis for orienting draft policies on which existing legislation for cycling safety could be aligned with road safety legislation of the EU Aquis and the Vienna convention. This will assist the Ministry of Transport (Department of Road Safety) and the Secretariat of Transport in Belgrade (specifically the Police for Road Traffic) to improve cycling safety and encourage its use as an alternative mode of urban transport.

The UNDP Resident Representative's participation brought a higher profile to the cycling campaign. This led to cycling events and promotions involving representatives of a European Commission Delegation to Belgrade, and a Regional EC Conference in May 2013 in Belgrade. In addition, a promotional ride was arranged to the Mountain Avala along the new bicycle lane. To this extent, there has been a response of the City to the "Let's cycle in Belgrade" campaign with additional cycling corridor investments and regulatory improvements on cycling safety.

3.3.4 Outcome 3: Safe and Sound to School

Intended Outcome 3*:* ⇒ Study on schools to participate in a programme to identify and describe best possible options for the City to encourage walking and cycling transport modes for the pupils to travel to school; ⇒ Workshops with children and their parents on "cycle labs" to develop their skills in simple repairing and maintenance of the bicycles; ⇒ Public awareness campaign on "Safe Routes to Schools" that includes public debates and sessions with parents in selected schools to increase their knowledge on greener and less costly means of school transport.
Actual Outcome 3: ⇒ *A satisfactory outcome has been achieved with the completion of a survey of a number of Belgrade elementary schools on the preferred modes of travel of both parents and children from home to school as well as other information on the level of awareness of children, parents and teachers on various transport and environment related issues. The result from this survey and the generally positive attitude towards this issue was the selection of an elementary school in downtown Belgrade for piloting a "safe routes to school" program. The program was to identify the routes most often used by schoolchildren to and from their homes and school, and to provide measures to ensure the safety of the children through special markings along the pavement sections and street crossings and introduce other traffic calming measures;* ⇒ *A satisfactory outcome has been achieved through Project support for providing special markings along pavement sections and street crossings along a "pedi-bus route" for pupils going to Sveti-Sava primary school. This was done in place of "cycle labs" based on the survey which indicated strong support amongst pupils and parents on walking to school, and a slight aversion to cycling by parents due to unresolved safety concerns for cyclists;* ⇒ *A satisfactory outcome has been achieved through the successful completion of an awareness raising campaign on "Safe routes to Schools" with primary schools. The campaign also has a website (http://www.pedibusbeograd.com) to serve as a communication portal for the parents of "Sveti Sava" pupils who are responsible for pupil pedibus trips.*

Rating: *relevance:* *3*
effectiveness: *5*
efficiency: *5*
overall rating: *4.3*

The activities of this component were revised from activities on "intelligent transport systems" comprising a public transport information center to direct schedules and dispatch, pilot programme for a high-occupancy vehicle (HOV) lane, and a pilot programme for car and taxi-sharing using mobile phones and social networking. While these original activities would ensure generation of significant GHG reductions through improving public transit services and the sharing of private cars for trips (thereby avoiding fossil fuels from private car trips), the "revised" activities of February 2011 were scaled down to the promotion of safe passage to schools for children. In comparison with the original activities, the potential for GHG emission reductions from these revised activities was also significantly reduced. Although the revised activities addressed a City priority, the relevance of this component with GHG reductions is moderately unsatisfactory.

The origins of this concept came during a visit by a former Secretary of Transport within the Belgrade Secretariat of Transport to the Netherlands in 2010. A baseline assessment of travel modes by children to schools revealed that the parents of elementary school pupils prefer to use private vehicles when taking their children to school for perceived reasons of safety. The impact of this travel mode, however, has been the opposite with heavier traffic in school zones producing a negative impact on overall traffic safety as well as on the environment. This impact is even more pronounced in Old Belgrade with its narrow streets. The impact of the Project's activities on this component was to initiate changes to this trend, and demonstrate the increased safety of the youngest population in transport on their round-trips to school as well as to raise their awareness on the environmental aspects of urban transport.

The result has been the strong engagement of the City and its taking over of the programme in January 2013 with another 14 primary schools in Belgrade being provided with pedi-bus routes, another 50 primary schools planned for pedi-bus upgrades in 2015, and active campaigning by the City on the "safe passage to schools". According to the City, the value of UNDP involvement on this component has been its approach and methodology to develop the programme. This included the use of questionnaires to pupils and parents, and surveys to gauge the needs of schools and the installation of special markings at pedibus street crossings. The resulting demonstration at the Sveti-Sava primary school demonstrated the need for new approaches to zoning systems for schools and the road network. This included the need to communicate with the users of the pedibus systems on the use of the system including understanding of the signs, signals and markings on the pedibus path and ensuring the correct responses by the children in their use.
Two issues under consideration for the future of the programme by the City include:

- the need for improving legislation for cycling safety as well as the need to improve cycling infrastructure for children going to school. The City notes that this is the primary reason for dropping of the "cycle labs"; and
- the installation of speed bumps at approaches to the pedi-bus street crossings. None have yet been installed at the 14 primary schools with a pedibus system; and
- the means to reduce vandalizing of the pedi-bus signs.

3.3.5 Outcome 4: Capacity building

Intended Outcome 4: ⇒ Train the Trainers Programme on eco-driving for the Public Transport Company of Belgrade; ⇒ Monitoring the effects of the Eco-drive trainings; ⇒ Case-study guide to aid replication of project elements.
Actual Outcome 4: ⇒ *A satisfactory outcome with the training of 25 certified trainers for eco-driving techniques that started in September 2013 and was completed in September 2014;* ⇒ *A satisfactory outcome has been achieved with a pilot training program for 80 drivers trained at one depot, as well as commercial bus and trucks drivers. The training provided a realization of 4.5% fuel savings.* ⇒ *A moderately unsatisfactory outcome has been achieved with case studies for "replication of project elements". Reports have been written on the driving performances of 27 bus drivers, 5 truck drivers and instructors, and 8 car drivers with their instructors on eco-driving skills. These case studies have not been assembled into a format that can be disseminated to other cities and stakeholders for replication. In addition, there has been a "Sustainable Urban Mobility Toolkit" prepared by the Project; however, this toolkit has not yet been issued to other cities interested in developing sustainable transport measures.*

Rating:	*relevance:*	*5*
	effectiveness:	*4*
	efficiency:	*3*
	overall rating:	*4*

This component was also revised from activities on "institutional transformation of government, businesses and the general public embrace sustainable transport". Original activities consisted of training on enterprise development for public transport operators and taxi fleets to optimize their operations to minimize fossil fuel consumption, and capacity building for regulatory development. The revised activities were reduced to the training of eco-driving skills for public transit drivers. These revised activities do have the potential for the generation of significant GHG reductions in Belgrade and other Serbian Cities. As such, the relevance of the outcome of activities of this component is only rated as moderately satisfactory.

The most tangible benefit of this Component has been the transfer of eco-driving skills to the drivers of the City Public Transport Company in Belgrade (known as GSP). With an average daily consumption of 93,000 litres of fuel each day (mainly diesel and CNG), over 646 fossil-fuelled buses, and more than 3,500 drivers serving 130 routes, GSP spends over USD 60 million annually on fuel. With subsidy levels of GSP operations being around 50%, there is a high level of interest in eco-driving techniques to reduce the company's fuel costs.

After the initial training-of-trainers (ToT) sessions, more than 80 drivers were trained in eco-driving skills in 2014. The sessions consisted of theoretical sessions followed by hands-on training with a vehicle. The monitoring activities of each bus revealed a 4.5% fuel savings on average or around 4,185 liters per day for the entire fleet of 646 buses. (which works out to annual savings of approximately USD 2.3 million to the company assuming an average price of diesel or petrol for buses is USD 1.50 per liter). This amount of fuel saved daily works out to approximately 4,090 tonnes CO_{2eq} of GHG emission reductions over a

year. The performance of each driver in relation to his fuel consumption was closely monitored creating competition amongst bus drivers.

The success of the eco-driving programme has led to GSP budgeting for eco-driving training for all their drivers within a period of 18 months. It has also led to considerations by GSP and the city to extend the eco-driving training to drivers of municipal vehicles such municipal maintenance fleets and taxi drivers. The only aspect of the programme that needs assistance is the purchase and installation of fuel consumption meters which will improve driver abilities to monitor their fuel consumption. The cost of one meter installed is approximately USD 2,000 to 3,000.

3.3.6 Overall Evaluation of Project

The overall rating of the Project is moderately satisfactory (MS). This is based on the following outcomes:

- The Project design of March 2010 (based on information from 2008 and 2009) was also overly ambitious in scope, notably with the GHG reductions targets and considering the GEF budget of USD 950,000 spread over a 4-year period;
- The significant changes made to the Project design made by City of Belgrade during the Inception workshop in February 2011, 2 to 3 years after the Project was designed, to reflect its priorities which had changed during 2009 and 2010. These changes, however, resulted in Project activities that were going to generate less GHG emission reductions than the original activities;
- Since the original GHG reductions targets could not be reduced during the life of the Project (and are not allowed to be reset due to GEF rules), the STB Project was saddled with unrealistic GHG reduction targets that were not achievable;
- Successful delivery of all revised Project components from the February 2011 Inception Workshop despite generation of lower volumes of GHG emission reductions. This did require strong efforts of the PIU to coordinate a wide range of stakeholders considering the numerous changes in counterpart staff[45], and the additional efforts required to inform new officials of the Project activities for their approvals and support. This included delivery of:
  - SUTP/SUMP development plans for the Belgrade LDA with committed funding from the Agency itself and an EBRD grant of over USD 500,000;
  - cycling safety regulations and development of cycling infrastructure in Old Belgrade with follow-up actions by the City to increase the scale of development;
  - the “Safe Routes to Schools” demonstration for an additional 14 primary schools in Belgrade and committed budgets for developing pedibus infrastructure for 50 additional primary schools in Belgrade in 2015;
  - transfer of eco-driving skills for the City Public Transit Company of Belgrade (GPS) that has led to plans and budget for 2015 and 2016 to scale-up eco-driving skills to its pool of 3,500 bus drivers as well as other drivers of public vehicles in Belgrade;
- The overall satisfaction of the City of Belgrade and MoAEP with the impact of the Project in raising issues of sustainable transport amongst their personnel and validating their current efforts and new approaches to incorporate GHG emission reduction considerations in their strategic documents. With the City actively improving

[45] There were 2 administrative changes within the Belgrade Secretariat of Transport and the Land Development Agency, and within the MoAEP during the course of the 57-month Project.

their public transport systems, City officials and MoAEP have said that there was value in these new approaches to sustainable transport;

- Replication efforts to disseminate guidelines and case studies of SUT measures to other cities in Serbia were not completed in December 2014, but a draft Toolkit has been prepared for dissemination in 2015.

Overall project ratings are provided on Table 5.

Table 5: Ratings for Each Project Outcome[46]

	Relevance	Effective-ness	Efficiency	Overall Rating
Monitoring and Evaluation:				
M&E design at entry	-	-	-	2
M&E plan implementation	-	-	-	3
Overall quality of M&E	-	-	-	2.5
UNDP and Executing Partner Performance:				
Quality of Implementation (UNDP)	-	-	-	3
Quality of Execution (MoAEP)	-	-	-	5
Overall quality of implementation/ execution (City of Belgrade)	-	-	-	4
Overall Results	3	3	2	2.7
Outcomes:				
Outcome 1: Documents for the preparation of the SUTP/SUMP for Belgrade have been developed	5	4	5	4.7
Outcome 2: Cycling transport mode has been successfully promoted	4	5	5	4.7
***Outcome 3*:** Safer walking passages to school	3	5	5	4.3
***Outcome 4*:** Eco-Driving skills transferred to public bus fleet drivers	5	4	3	4
Overall Rating:	4.0	4.2	4.0	3.9

3.3.7 Country Ownership and Drivenness

Sustainable development remains an objective of the Serbian Government and the Belgrade City Administration. Ownership and drivenness of the Serbian Government and the Belgrade City Administration, however, has been weakened by the frequent changes in administrative and counterpart personnel working on sustainable transport. As a result, development of the corporate memory for sustainable transport is notably weakened with the City.

[46] 6 = HS or Highly Satisfactory: There were no shortcomings;
5 = S or Satisfactory: There were minor shortcomings,
4 = MS or Moderately Satisfactory: There were moderate shortcomings;
3 = MU or Moderately Unsatisfactory: There were significant shortcomings;
2 = U or Unsatisfactory: There were major shortcomings;
1 = HU or Highly Unsatisfactory.

3.3.8 Sustainability of Project Outcomes

In assessing Project sustainability, we asked "how likely will the Project outcomes be sustained beyond Project termination?" Sustainability of these objectives was evaluated in the dimensions of financial resources, socio-political risks, institutional framework and governance, and environmental factors, using a simple ranking scheme:

- *4 = Likely (L):* negligible risks to sustainability;
- *3 = Moderately Likely (ML):* moderate risks to sustainability;
- *2 = Moderately Unlikely (MU):* significant risks to sustainability; and
- *1 = Unlikely (U):* severe risks to sustainability.
- *Overall rating is equivalent to the lowest sustainability ranking score of the 4 dimensions.*

The overall Project sustainability rating is moderately unlikely (MU). This is primarily due to:

- Heightened awareness in the City of sustainable transport development;
- Confirmed financing for next phases of SUTP/SUMP;
- Investments being made in the expansion of the cycling network and pedi-bus systems for schools;
- Efforts to strengthen legislation on the safety of cycling in Belgrade;
- Concerns over financial resources available for the expansion of eco-driving training by GSP. This is limited by the lack of on-board fuel consumption monitoring equipment for which no funds are currently available for purchase and installation on buses;
- Concerns over the availability of sufficient budget to finance sustainable urban transport measures.

Details of sustainability ratings for the STB Project are provided on Table 6.

Table 5: Assessment of Sustainability of Outcomes

Actual Outcomes (as of November 2014)	Assessment of Sustainability	Dimensions of Sustainability
Actual Outcome 1: Documents for the preparation of the SUTP and SUMP for Belgrade have been developed	• *Financial Resources:* More than €0.5 million is available from EBRD and the LDA for implementing the next phase of deliver a SUTP/SUMP development for Belgrade; • *Socio-Political Risks:* Despite frequent changes in the political directions of the City, there appears to be unanimous support for the development of a SUTP/SUMP (including the residents of Belgrade as indicated through public surveys; • *Institutional Framework and Governance:* Capacity of the Secretariat of Transport is weak in managing the completion of a SUTP/SUMP. This weak capacity, however, should not serve as a barrier to the completion of the SUTP/SUMP; • *Environmental Factors:* There are no environmental factors that would hinder development of the SUTP/SUMP. ***Overall Rating***	4 4 4 4 **4**
Actual Outcome 2: Cycling transport mode has been successfully promoted	• *Financial Resources:* The City has committed resources to continue cycling promotions as well as to continue cycling infrastructural and safety regulatory improvements; • *Socio-Political Risks:* There is widespread support for cycling in Belgrade; • *Institutional Framework and Governance:* The City have a Cycling Commissioner in place to provide oversight to cycling improvements in Belgrade; • *Environmental Factors:* There are no environmental factors that would hinder the promotion of cycling in Belgrade ***Overall Rating***	4 4 4 4 **4**
Actual Outcome 3: Safer walking passages to school	• *Financial Resources:* Budgetary allocations for 50 schools in 2015 are confirmed; • *Socio-Political Risks:* There is strong Government support for cycling development and strong cycling NGOs to support its increased use as a viable mode of urban transport; • *Institutional Framework and Governance:* Secretariat of Transport provides oversight; • *Environmental Factors:* There are no environmental factors that would hinder the promotion of safe walking passages to schools. ***Overall Rating***	4 4 4 4 **4**
Actual Outcome 4: Eco-Driving skills transferred to public bus fleet drivers	• *Financial Resources:* Fiscal resources are available GSP to transfer these skills to all bus drivers and other public vehicle operators. However, there are no funds for the purchase and installation of on-board fuel consumption monitoring gauges that would strengthen MRV efforts to reduce fuel consumption on public vehicles; • *Socio-Political Risks:* High level of support amongst bus drivers; • *Institutional Framework and Governance:* GSP provides oversight to this effort; • *Environmental Factors:* There are no environmental factors that would hinder the transferral of eco-driving skills to bus fleet drivers ***Overall Rating***	2 4 4 4 **2**
	Overall Rating of Project Sustainability:	**2**

3.3.9 Impacts

The Project had a positive impact on raising awareness within the City of Belgrade and a wide cross section of Belgrade residents on the benefits of sustainable transport modes. This is especially true with the City whose interest was catalyzed to the extent that the City has made investments or have committed to investments further into Project activities such as cycling infrastructure, safe passage to schools, and eco-driving techniques for a range of commercial and public vehicles operators in Belgrade. The Project had a strong impact of raising awareness with MoAEP and other national ministries of the benefits of sustainable transport to the extent that GHG emissions need to be incorporated into their strategic documents. Moreover, the Project has drawn attention to the other large cities of Serbia who are interested in similar sustainable transport investments as a means of improving their urban quality of life.

The Project, however, did not have its intended impacts with regards to GHG emission reductions. The Inception Workshop of the Project was held almost 3 years after the Project was designed. By this time, many of the Project's proposed actions had been undertaken by the City with its own resources. This facilitated design changes of the STB Project (as outlined in Table 2) as discussed during the Inception Workshop of February 2011; this had the impact of reducing the scope of the Project, and reducing the influence of Project activities in generating significant transport-related GHG reductions. Despite the overly ambitious direct GHG reduction target of 285,120 tonnes CO_{2eq}/year, the actual direct GHG emission reduction of the Project was only 744 tonnes CO_{2eq}/year by the EOP year of 2014, an insignificant number. Follow-up actions of the City of Belgrade and the interest of other Serbian cities in sustainable transport developments in Belgrade generated total indirect CO_{2eq} emission reductions of more than 160,000 tonnes CO_{2eq} (equivalent to 16,000 tonnes CO_{2eq}/year over a 10-year period), a bit less than the target of 710,000 tonnes CO_{2eq} (equivalent to 71,000 tonnes CO_{2eq} /year). Details are provided in Table 3. Nevertheless, given the initial low level of awareness of the City of Belgrade and relevant national ministries at the commencement of the STB Project, the City of Belgrade and the Republic of Serbia have only recently intensified their interest in addressing sustainable transport.

4. CONCLUSIONS, RECOMMENDATIONS AND LESSONS

4.1 Conclusions

- The Project had a number of significant design issues including:
  - An unrealistic GHG emission reduction target of 285 ktonnes per year CO_{2eq} by the EOP of the Project; and
  - A small Project budget of USD 950,000 that was to undertake some of Belgrade's sustainable transport priorities such as park-and-ride plans and improvements to public transport in the Old City. The scale of these sustainable transport measures, however, requires a project of longer duration and larger budget, which the STB Project did not have;

- The STB Project had a number of implementation issues including:
  - the Project being implemented 3 years after it was designed, and during a time when many of the proposed activities were already being implemented. This placed the Project in a position where its activities would have less influence and less impact than originally planned;
  - unforeseen Project resources expended on efforts to familiarize new government counterparts on the Project during its preparation and implementation. This was a result of more than 4 local and national elections at the City and MoAEP during the 57-month course of the STB Project, and two administrative changes during the 2-year preparatory phase. This added to the difficulties of implementing this Project;
  - implementation of scaled-down STB Project activities that would generate significantly less GHG emission reductions; and
  - the mid-term evaluation taking place 3 years into the Project when 81% of the budget was spent, making adaptive management of the Project very difficult after the MTE;

- The results of the STB Project included preparations for Belgrade's SUPT, awareness raising activities for cycling in Belgrade, and pilot implementation of safe passage to schools for children and eco-driving skills for public bus drivers. This led to a primary benefit of the STB Project to the City and MoAEP in raising their awareness of sustainable urban transport in Belgrade and to improve the confidence and knowledge level of the City on different approaches to developing sustainable transport measures, especially in the Old City. This is evident in the engagement of the City into sustainable transport investments including their investments into expanded programs on cycling, safe passage to schools and eco-driving skills, located mainly on the side of Old Belgrade;

- The sustainability of the Project is affected by the lack of funds for the purchase and installation of on-board fuel consumption monitoring gauges that would strengthen MRV efforts to reduce fuel consumption on public vehicles. This rating has been given notwithstanding the fiscal resources that have been availed to Belgrade's public bus company, GSP, to transfer eco-driving skills to all bus drivers and other public vehicle operators.

- There is a need to continue technical assistance to the City and MoAEP in sustainable transport development that would include:
  - A program to collect baseline data for transport-related emissions and the use of the COPERT model to analyze vehicle emissions to align with EU-practices;
  - Approaches for stakeholder inclusiveness (i.e. use of stakeholder questionnaires and consultations) in the design and development of sustainable transport measures;

- Strategic approaches to sustainable transport development in the City involving the need to remove the number of cars in the Old City. These strategies now include improved public transport and the increased pedestrianization in the Old City supported by improved cycling corridors;
- Development of measures to ensure sustainability of improved public transport and increased pedestrianization of Old Belgrade and the rest of the City through the generation of revenue streams to support the 50% subsidies currently provided to GSP public transit services in Belgrade. These revenue streams could be generated from reductions in municipal operating costs for Belgrade (such as reduced energy costs from energy efficiency measures).

4.2 Recommendations

Recommendation 1: MoAEP and the City of Belgrade need to collect transport-related baseline data. While this may already be occurring, the collection of this data is important for the country in its obligations to report GHG emissions to UNFCCC. However, to accelerate the development of MoAEP's capacity to address transport-related GHG emissions, MoAEP should seek technical assistance from a donor agency on the collection of such data. In this regard, MoAEP should look at other sustainable transport projects such as the one in Bratislava supported by UNDP-GEF where cameras were setup at the strategic entry points into the City to get a profile of vehicle types being operated in Bratislava City. This data along with fuel sales data for Bratislava were calibrated against a COPERT model setup for Bratislava to provide a reasonable estimate of GHG emissions for the City. These approaches will assist MoAEP in designing transport-related policies, and provide valuable baseline data on which future transport interventions can be compared against to assess their impact on transport-related GHG emissions.

Recommendation 2: Institutional strengthening and funding are required to accelerate City's learning pace of EU standards for sustainable urban transport and the preparation of SUTPs/SUMPs. Technical assistance from a donor agency is required to sensitize City technical personnel to incorporate GHG emission reductions in their strategic and design documents for improving urban transport in Belgrade. This may include the procurement and training in the use of modernized tools for planning sustainable transport measures such as Aimsun Microsimulation[35], a software for computerizing traffic models that will inform the development of a SUTP/SUMP and other emerging infrastructure level interventions. The presentation of outputs from this type of software can be visually-friendly and allow stakeholders to clearly see the causes of traffic congestion and proposed measures to mitigate that may lead to accelerated approvals. It can also be used to demonstrate the impact of traffic volumes versus differing land uses which can affect and inform integration of urban land use and transport policies.

Recommendation 3: Future assistance to Belgrade on SUT measures should focus on the following activities:

- Equipping all buses with fuel consumption gauges to support fleet skills for eco-driving;
- Synchronization of signals and priority signalling for public transit;
- Improving public transit services to Old City along with support for park-and-ride transit facilities in outlying areas. This will provide Belgrade citizens with an alternate means of transport from the suburbs into the Old City; and

[35] www.aimsun.com

- Pedestrianization of Old Belgrade to facilitate NMV modes of transport and a corresponding reduction in cars and road congestion;
- Improving MRV capacities within the City and MoAEP on monitoring GHG and other emissions related to urban transport in Belgrade[36].

Recommendation 4: To sustain the development and operation of SUT measures in Belgrade, future assistance should also focus on identification of other revenue streams through an integrated "green cities approach" that will assist the Municipal Government in public transport subsidies. This could consist of a review of municipal expenditures to identify opportunities for municipal operational cost efficiencies. This could be achieved through a holistic approach to green urban development that may entail development of programmes for energy efficiency for municipal facilities (such as municipal buildings, water treatment plant and street lighting), renewable energy development (such as waste-to-energy and wind and solar generation facilities), district heating efficiencies, reducing water consumption, promotion of green construction and building materials, surface water management, and green infrastructure (i.e. urban parks forests and wetlands), all of which can provide cost savings to municipal operating budgets, and partial relief from subsidies into public transport. Realized municipal cost reductions may free up budgets that could augment infrastructure or operational funding for sustainable transport systems.

Recommendation 5: The time for GEF Projects between approval and implementation needs to be minimized to reduce the risks of reduced project influence. The STB Project suffered from a lag of 2 to the 3 years between the actual Project design (2008-09) and actual implementation (February 2011 Inception Workshop). While the Project was approved for implementation in March 2010, actual implementation did not commence until November 2010 February 2011 when a number of the original Project activities were already being implemented without Project assistance. As such, Project activities were changed to address their 2011 priorities in sustainable transport. This 13-month delay was due to the long process of recruiting a Project Manager. Improvements need be made to minimize the duration of the recruitment process for project personnel that should include pre-screening of candidates.

Recommendation 6: GEF should re-consider investment of its resources for sustainable transport projects under USD 2.0 million and less than 5 years in duration. If the purpose of GEF funds is to reduce transport-related GHG emissions, amounts less than USD 2.0 million have a higher risk of not achieving such a result. The risks are higher that there is insufficient time and fiscal resources to improve public transit services or to develop sustainable transport infrastructure such as a dedicated bus lanes, prioritized signaling for public transit vehicles, and a cycling network. The STB Project underwent significant changes at the Inception Workshop to transform the Project with overly ambitious targets (to be achieved within 4 years) to a Project with activities that could be supported by the USD 950,000 budget but with the possibility of having considerably less impact. By scaling down the activities, the STB Project was able to achieve its objectives within a 4-year period, if the effective Project period was considered to be November 2010, the start date of the PM to December 2014. The GHG reductions of these scaled-down activities, however, were small. If GEF wishes to have a sustainable transport project with more ambitious GHG reduction targets, a project with more resources and more time (more than 5 years) will be required.

[36] This would be consistent with the directions plotted by the Second National Communications for Serbia

4.3 Lessons Learned

Key lessons from the STB Project include:

- Thorough project preparations are essential for the setup of a successful sustainable transport project design and to minimize delays in implementation. This would include:
  - thorough stakeholder engagement, and most importantly, an understanding of the institutions to be involved with the project. Since sustainable transport projects are almost always politically motivated, assessment of the political risks is most important. Moreover, a sustainable transport should be planned to be in synchronization with the political cycle; this will minimize the time and effort required to familiarize new government officials with the project;
  - having access to stakeholder perspectives of urban transport, and determining their needs through questionnaires and surveys. No such information was collected in Belgrade. Such information and data collection could provide an improved understanding of travel demands within Belgrade. Disaggregation of this data could be made where appropriate into the various social groups whose travel patterns and needs may be distinct from other groups;
  - the collection of baseline information on traffic patterns and passenger volumes as well as vehicle energy consumption and usage patterns that could be achieved through the use of modernized traffic computer models (see Recommendation 2); and
  - enabling project designers and implementers to setup meaningful and achievable targets that would effectively measure project impacts.

- Mid-term evaluations need to be done at the mid-point of a Project; for a 4-year project, the latest a mid-term evaluation should take place is 2 years after its start. This is to allow the project an adequate amount of time to adaptively management implementation issues.

APPENDIX A – MISSION TERMS OF REFERENCE FOR PROJECT FINAL EVALUATION

Title: Independent International Consultant for conducting Terminal Evaluation of UNDP/GEF project
Project: Support to the Sustainable Transport in the City of Belgrade
Reporting to: UNDP Portfolio Manager,

Duty Station: **Home-based, one mission to Belgrade**
Duration: **2 months, estimated 25 working days in a period of 60 calendar days** (including 5 working days in Belgrade, Serbia) **(output based consultancy)**
Starting date: **October, 2014**
Contract Type: **Individual Contract (IC) or Reimbursable Loan Agreement (RLA)**

Background

a. **Purpose**

The Terminal Evaluation is initiated by the UNDP CO Serbia as the Implementation Agency for the project "Support to the Sustainable Transport in the City of Belgrade" and it aims to determine whether the project has met its objectives accordingly, to document the lessons learned and best case practices, and to recommend the most appropriate next steps to ensure the sustainability of results.

b. **Objective**

This terminal evaluation is intended to assess the relevance, performance and success of the project. It looks at early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. It will also identify/document lessons learned and make recommendations that might improve design and implementation of other UNDP-GEF projects.

The evaluator should seek the perspectives of the different project stakeholders, mainly in the Ministry of Agriculture and Environmental Protection, the City of Belgrade (Secretariat for Transport and Belgrade Land Development Agency) UNDP CO, members of the Project Board, and other project stakeholders, and ensure such perspectives are duly reflected in the evaluation.

More specifically the purpose of the TE is:
- To assess overall performance against the project objective and outcomes as set out in the Project Document and other related documents;
- To assess the effectiveness and efficiency of the project;
- To analyze critically the implementation and management arrangements of the project;
- To assess the progress towards achievement of the outcomes;
- To assess the sustainability of the project's interventions;
- To list and document initial lessons concerning project design, implementation and management;
- To assess project relevance to national priorities;
- To provide lessons learned for the future.

c. **Background Information**

The evaluation is to be undertaken taking into consideration the GEF Monitoring and Evaluation policy (http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html) and the UNDP/GEF M&E policies and procedures (http://www.undp.org/gef/05/monitoring/policies.html).

Project Background

Belgrade, as with many cities today, faces a multitude of challenges related to congestion, noise, air quality issues, health, safety, quality of life and the problem with a multitude of diverting policies in the field of urban transport. On the global level, the challenge of climate change and its environmental, health and economic impacts is strongly connected to transport and unsustainable mobility behavior. These challenges are the driving forces behind recent calls for powerful measures to address Sustainable Transport. This Project is one of the pioneer attempts in Serbia to address these challenges and issues at wider scale.

The City of Belgrade's institutions - the Land Development Agency and the Secretariat for Transport - are identified as the main partners and beneficiaries of the project. Ministry of Agriculture and Environmental Protection is main national counterpart that oversees the implementation of the project through nominated National Project Director. The project design is conceived in such a way to stimulate and support the main partners in their operations targeting the improvement of the sustainable urban transport in the City of Belgrade.

The official start date of the project was 9th February 2011 when an Inception Workshop was held in Belgrade. The Inception Workshop invited not only these key project stakeholders but also other International institutions and donors present in the Country in order to discuss widely the issues of urban transport and sustainability in the context of how this project can best assist to promote Sustainable Transport in the City of Belgrade. The Workshop resulted in recommendations brought by unanimity of the both partners; the Project manager and the GEF Regional Technical Adviser that the Project Document was designed quite some time ago and that many of the activities prescribe for actions are either outdated, or already performed. In additions, participants believed that given the limited budget of the project it makes more sense to focus on fewer activities and outputs. Over an open discussion during the Workshop, an accord was achieved that the Project Document was to be revised during the inception period by proposing actions that are fully in line with the overall project objectives, contributing to reduction of emissions from urban transport in the City of Belgrade.

This was subsequently achieved and the revised project outcomes were defined within the Inception Report, approved at the first Project Steering Board meeting held on 21 April 2011.

Project Objective and Outcomes

The UNDP Project to Support the Sustainable Urban Transport in the City of Belgrade is financed through the Global Environmental Facility. The project budget amounts to 950,000 USD and has duration of four years.

The overall objective of the project is to reduce the greenhouse gas emissions in the City of Belgrade by improving the public transport scheme, increasing the participation of cyclists in the traffic and provide the policy framework for sustainable urban transport development of the city of Belgrade.

The outcomes of the project shall be achieved through the implementation of four main activity groups and the subsequent delivery of expected results.

The first activity is developed around the planning process for the Sustainable Urban Transport Plan.

Urban mobility issues are complex and cannot be successfully solved by simple transport plans. They require radical new policy instruments together with an integrated approach to mobility and the design of the cities. Sustainable Urban Transport Plans (SUTP) are the foundation upon which a new approach to transport can be built by embracing radical new polices and facilitating the necessary integration of transport, urban and economic planning. Preparing the SUT planning phase is one of the four outputs and one of the most important ones. The planning process for a SUT plan is an equally important segment of the entire project cycle and provides a basis to build the rest of the activities upon. As one of the four main outcomes of this

Project is a completed planning process for launching the preparation of the Sustainable Urban Transport Plan (SUTP). The objective of the Planning process of a Sustainable Urban Transport Plan is to provide the stakeholders (the Belgrade Land Development Agency and the Directorate for Urbanism) with a mature and well-elaborated process to advance sustainable urban transport planning in Belgrade. This objective is accomplished within the frame of this project. The final product shall ensure that the urban transport systems of Belgrade meet society's economic, social and environmental needs whilst minimizing their undesirable impacts on the economy, society and the environment.

Promoting cycling presents the second activity of the Project.
Protection of the environment and the pursuit of energy security lie in the heart of the European transport policy by promoting also the co-modality. The transport policy that Serbia is to follow is calling upon increased use of green modes of transport and balanced participation of all modalities, without decrementing one on the account of the other. These misbalances are mostly expressed in the urban areas and Belgrade is a good example of that. The cycling and walking modes of transport are not taken into account by the strategic urban development documents and not addressed in practice adequately. Significant attention was paid through this project in promoting the cycling transport mode by involving all sides into campaigns, public open events, competitions. The cyclists received the first digital cycling maps (GPS) to facilitate and stimulate the two-wheel commuting. The awareness of the public authorities is raised and priorities start being put on the side of these green modes of transport, equally by safeguarding their rights and safety as well as investing into the needed infrastructure. Moreover, two cycling routes were marked in order to connect city center and suburban recreational areas in Belgrade (Avala mountain and Bojcinska forest), as well to improve safety of cyclists.

Building on the education and awareness of the youngest population on the green modes of mobility implemented through the third activity.
Mobility isn't simply an essential component of the competitiveness of the industries and services; it is also an essential citizen right. And the practice worldwide shows that the parents in the attempt to enjoy this right but also protect their children are using mostly the private car as transportation mean. The project proves to be a pioneer in supporting the sustainable urban mobility, by changing the behaviour and habits of the parents, teachers and children through demo projects by involving several schools, organizing "pedibuses"-group walking for primary school pupils, marking the safe routes to schools.

Enhancing the capacities of the professional drivers in eco-driving and creating a pool of trainers presented the fourth activity.

Eco-driving improves road safety as well as the quality of the local and global environment and saves fuel and costs. All three benefits are important for furthering eco-driving. Eco-driving is a fuel-efficient, adaptive and safe way of driving. Training in eco-driving teaches car drivers to utilize vehicles differently and bring out new potentials by adaptive driving including foreseeing traffic situations and economic ways of using gears and brakes. The capacity and knowledge of the public transport companies has been reinforced through this project. Eco-driving trainings were delivered to selected number of professional drivers working in the Urban Public Transport Enterprise "Beograd". In order to provide sustainability, the eco-driving education will be extended to the teachers form the High schools for transport. The goal is to achieve integration of eco-driving in driving school curricula and driving tests, establishment of minimum standards for contents and set up of eco-driving trainings and train-the-trainer seminars and establishment of an eco-driving infrastructure which will keep the approach alive after the end of the project.

Duties and Responsibilities

a. **Scope of work**

The evaluation will focus on the range of described aspects. In addition to a descriptive assessment, all criteria (relevance, effectiveness and efficiency) should be rated using the following divisions: *Highly Satisfactory, Satisfactory, Marginally Satisfactory, or Unsatisfactory*. All ratings given should be properly substantiated.

b. Methodology

The evaluation approach will combine methods such as documentation review (desk study); interviews; and field visits. All relevant project documentation will be made available to the consultant by the project management team, facilitated by UNDP. After studying the documentation the consultant will conduct interviews with all relevant partners including the key partners and beneficiaries. Validation of preliminary findings with stakeholders will happen through circulation of initial reports for comments or other types of feedback mechanisms.

Throughout the period of the evaluation, the consultant will liaise closely with the UNDP CO, UNDP/GEF RTA, the concerned agencies of the Government and the counterpart staff assigned to the project. The consultant can raise or discuss any issue or topic it deems necessary to fulfill the task, the consultant however is not authorized to make any commitments to any party on behalf of UNDP or the Government.

Although the Evaluator should feel free to discuss with the authorities concerned, all matters relevant to its assignment, it is not authorized to make any commitment or statement on behalf of UNDP or GEF or the project management.

The Evaluator should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

The evaluation should assess:

Project concept and design

The evaluators will assess the project concept and design. He/she should review the problem addressed by the project and the project strategy, encompassing an assessment of the appropriateness of the objectives, planned outputs, activities and inputs as compared to cost-effective alternatives. The executing modality and managerial arrangements should also be judged. The evaluator will assess the achievement of indicators and review the work plan, planned duration and budget of the project.

Implementation

The evaluation will assess the implementation of the project in terms of quality and timeliness of inputs and efficiency and effectiveness of activities carried out. Also, the effectiveness of management as well as the quality and timeliness of monitoring and backstopping by all parties to the project should be evaluated. In particular, the evaluation is to assess the Project team's use of adaptive management in project implementation starting from the inception workshop.

Project outputs, outcomes and impact

The evaluation will assess the outputs, outcomes and impact achieved by the project as well as the likely sustainability of project results. This should encompass an assessment of the achievement of the outcomes and the contribution to attaining the overall objective of the project. The evaluation should also assess the extent to which the implementation of the project has been inclusive of relevant stakeholders and to which it has been able to create collaboration between different partners. The evaluation will also examine if the project has had significant unexpected effects, whether of beneficial or detrimental character.

The Terminal Evaluation will also cover the following aspects:

1. Progress towards Results

Changes in development conditions: Assess the way the project has contributed in supporting the business of the national partners in line with the project main objectives.

Measurement of change*:* Progress towards results should be based on a comparison of indicators before (i.e., baseline) and after (up-to-date) the project intervention. Progress can also be assessed by comparing conditions within the project boundaries to conditions in similar unmanaged areas.

Project strategy: how and why outputs in the project document and strategies contribute to the achievement of the expected results. Examine their relevance and whether they provide the most effective route towards results.

Sustainability: Extent to which the benefits of the project will continue, within or outside the project boundaries, after it has come to an end. Relevant factors include for example: development of a sustainable financing strategy, design and implementation of novel financial and economic instruments and mechanisms, mainstreaming project objectives into the cross-cutting economic sectors, etc.

2. Project's Adaptive Management Framework

(a) Monitoring Systems

- Assess the monitoring tools currently being used:
  - Do they provide the necessary information?
  - Do they involve key partners?
  - Are they efficient?
  - Are additional tools required?
- Ensure the monitoring system, including performance indicators, at least meets GEF minimum requirements[37].
- Apply the GEF Tracking Tools and provide a description of comparison with initial application of the tool.

(b) Risk Management

- Validate whether the risks identified in the project document and PIRs are the most important and whether the risk ratings applied are appropriate. If not, explain why. Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted;
- Assess the project's risk identification and management systems:
  - Is the UNDP/GEF Risk Management System appropriately applied?
  - How can the UNDP/GEF Risk Management System be used to strengthen project management?

(c) Work Planning

- Assess the use of the logical framework as a management tool during implementation and any changes made to it
  - Ensure the logical framework meets UNDP/GEF requirements in terms of format and content
  - What impact did the retro-fitting of impact indicators have on project management?
- Assess the use of routinely updated workplans;
- Assess the use of electronic information technologies to support implementation, participation and monitoring, as well as other project activities;
- Are the work planning processes result-based[38]?
- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions. Any irregularities must be noted.

[37] See section 3.2 of the GEF's "Monitoring and Evaluation Policies and Procedures", available at: http://www.thegef.org/gef/node/4184

[38] RBM Support documents are available at http://www.undp.org/eo/methodologies.htm

(d) Reporting
- Assess how adaptive management changes have been reported by the project management;
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

3. Underlying Factors
- Assess the underlying factors beyond the project's immediate control that influence outcomes and results. Consider the appropriateness and effectiveness of the project's management strategies for these factors;
- Re-test the assumptions made by the project management;
- Assess the effect of any incorrect assumptions made by the project.

4. UNDP Contribution
- Assess the role of UNDP against the requirements set out in the UNDP Handbook on Monitoring and Evaluating for Results. Consider:
  - Field visits
  - Steering Committee/TOR follow-up and analysis
  - PIR preparation and follow-up
  - GEF guidance
- Consider the new UNDP requirements outlined in the UNDP User Guide[39], especially the Project Assurance role, and ensure they are incorporated into the project's adaptive management framework;
- Assess the contribution to the project from UNDP "soft" assistance (i.e. policy advice & dialogue, advocacy, and coordination). Suggest measures to strengthen UNDP's soft assistance to the project management.

5. Partnership Strategy
- Assess how partners are involved in the project's adaptive management framework:
  - Involving partners and stakeholders in the selection of indicators and other measures of performance
  - Using already existing data and statistics
  - Analyzing progress towards results and determining project strategies.
- Identify opportunities for stronger substantive partnerships;
- Assess how local stakeholders participate in project management and decision-making; Include an analysis of the strengths and weaknesses of the approach adopted by the project;
- Consider the dissemination of project information to partners and stakeholders.

5. The evaluation must provide evidence-based information that is credible, reliable and useful. It must be easily understood by project partners and should contain actionable recommendations. The methodology to be used by the evaluator should be presented in the report in detail. It shall include information on:

- Documentation review (desk study) - the list of reviewed documentation (note: it be made available to the Evaluator at the mission outset)

The consultant should also provide **ratings** of Project achievements according to GEF Project Review Criteria. Aspects of the Project to be rated for its relevance, effectiveness and efficiency are:

1	Implementation approach;
2	Country ownership/drivers
3	Outcome/Achievement of objectives (the extent to which the project's environmental and development objectives were achieved).
4	Stakeholder participation/public involvement

[39] The UNDP User Guide is currently only available on UNDP's intranet. However UNDP can provide the necessary section on roles and responsibility from http://content.undp.org/go/userguide/results/rmoverview/progprojorg/?src=print

5	Sustainability;
6	Replication approach;
7	Financial management and Cost-effectiveness;
8	Monitoring and evaluation

In assessing the project performance evaluators will use the rating scales corresponding with GEF Guidelines for evaluations (http://www.thegef.org/gef/sites/thegef.org/files/documents/Policies-TEguidelines7-31.pdf).

The following rating scale should be used for assessment of outcomes:

a. **Highly satisfactory (HS).** The project had no shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.
b. **Satisfactory (S).** The project had minor shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.
c. **Moderately satisfactory (MS).** The project had moderate shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.
d. **Moderately unsatisfactory (MU).** The project had significant shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.
e. **Unsatisfactory (U).** The project had major shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.
f. **Highly unsatisfactory (HU).** The project had severe shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency.

PRODUCTS EXPECTED FROM THE EVALUATION

The key product expected from this evaluation is a comprehensive analytical report in English that should, at least, include the following contents:

- **Executive summary (2-3 pages)**
  - Brief description of the project
  - Context and purpose of the evaluation
  - Main conclusions, recommendations and lessons learned

- **Introduction (5 pages max.)**
  - Project background
  - Purpose of the evaluation
  - Key issues addressed
  - Methodology of the evaluation
  - Structure of the evaluation

- **The Project and its development context (5 pages max.)**
  - Project start and its duration
  - Implementation status
  - Problems that the project seek to address
  - Immediate and development objectives of the project
  - Main stakeholders
  - Results expected

- **An analysis of the situation with regard to the outcomes, the outputs and the partnership strategy (3-5 pages)**

- **Key findings (including best practice and lessons learned, assessment of performance) (20 pages max.)**

- Project formulation
  - Implementation approach
  - Country ownership
  - Stakeholder participation
  - Replication approach
  - Cost-effectiveness
  - UNDP comparative advantage
  - Linkages between project and other interventions within the sector
  - Management arrangements
- Implementation
  - Financial planning
  - Monitoring and evaluation
  - Execution and implementation modalities
  - Management by the UNDP country office
  - Coordination and operation issues
  - Identification and management of risks (adaptive management)
- Results
  - Attainment of objective
  - Prospects of sustainability

- **Conclusions and recommendations (5-10 pages)**
  - Corrective actions for the design, implementation, monitoring and evaluation of the project
  - Actions to strengthen or reinforce benefits from the project
  - Proposals for future directions underlining main objectives

- **Lessons learned (3-5 pages)**
  - Good practices and lessons learned in addressing issues relating to effectiveness, efficiency and relevance.

Deliverables and Timeline

It is expected that the evaluation will require an estimated input of 25 working days, to be completed within **a period of 60 calendar days** (which includes one 5-day mission to Belgrade), with the following deliverables due:

Deliverables	Deadline
• Inception report including work plan and evaluation matrix prepared and accepted	10 calendar days from signing the contract
• 5 Day Mission to Belgrade	20 calendar days from signing of the contract
• Draft Evaluation Report on approximately 20 pages prepared and accepted	35 calendar days from signing the contract

• Draft Evaluation Report presented to the Project Team, Implementing Partner and beneficiaries	40 calendar days from signing the contract
• Final Evaluation report (approx. 30 – 40 pages) with Executive Summary (3 pages max.) prepared and accepted by UNDP	55 calendar days from signing the contract(5 days after receiving the comments on the final draft)

All payments will be made upon delivery, quality assurance and prior approval of outputs by UNDP and as per schedule above.

6. IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation lies with UNDP Serbia. UNDP Serbia will contract the evaluator on a lump-sum basis that includes the entire work assignment and production of all deliverables, and all costs related to the required 5 day evaluation mission to Belgrade. UNDP Serbia and Ministry of Agriculture and Environmental Protection will be responsible for liaising with the evaluator to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

Timeframe for submission of first draft of the report: 5 weeks upon signing the contract.

The tentative duration of respective activities is:

Activity	Timeframe and responsible party
Desk review	5 days by the Evaluator (home-based)
Briefings for evaluator with UNDP CO, UNDP Regional Center, Project Stakeholders +Field visits, interviews, questionnaires, de-briefings	10 days by the Evaluator (5days-home based, 5 days based in Belgrade, Serbia)
Validation of preliminary findings with stakeholders through circulation of draft reports for comments, meetings and other feedback mechanisms	5 days by the Evaluator (home-based)
Finalization of the evaluation report (incorporating comments received on first draft)	2 days by the Evaluator (home-based)

Working Days:

The proposed dates for the in-country mission to Serbia are during mid-October/mid-November 2014. The evaluator is expected to invest approximately 25 working days over a period of 60 calendar days with a 5-day mission to Belgrade.
The Consultant is not entitled to any travel allowances and per diems as the payment in the framework of this contract will be made on a lump-sum basis.

Skills and Competencies

- Excellent analytical skills
- Displays ability to synthesize research and reach empirically based conclusions on related subject
- Strong writing skills
- Proven capacity to produce reports
- Displays capacity to provide experienced advice on best practices
- Possesses knowledge of inter-disciplinary development issues

- Focuses on result for the client and responds positively to feedback
- Good application of Results-Based Management
- Good communication, coordination and facilitation skills
- Consistently ensures timeliness and quality of work
- Treats all people fairly without favourism
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability
- Demonstrates integrity by modeling ethical standards

Qualifications and Experience

Education:
Masters or equivalent in relevant field of transport, mobility, traffic engineering, civil engineering, urban planning, architecture

Work experience:
- Minimum 7 years of relevant professional experience, preferably in international/multilateral development context;
- Minimum 5 years of experience in management or implementation of projects related to transport and urban mobility issues;
- Prior proven experience as an evaluator of transport related projects *(please submit a proof for this requirement);*
- Experience in evaluating and monitoring technical cooperation and development activities and projects;

Knowledge
- Excellent understanding of Serbia's socio-economic situation
- Understanding of current policies and legislation on environment, climate change, transport and urban mobility
- Knowledge of EU environment, climate change and mobility policy will be an asset;
- Recent knowledge of the GEF Monitoring and Evaluation Policy;
- Project evaluation experiences within United Nations system will be considered an asset;
- Knowledge in the use of computers and office software packages and handling of web based monitoring systems

Personal qualifications
- Ability to deliver when working under pressure and within changing circumstances
- Consistently approaches work with energy and a positive, constructive attitude
- Excellent interpersonal skills

Language:
Excellent knowledge of written and spoken English.

NOTE: The evaluators must be independent from both the policy-making process and the delivery and management of assistance. Therefore applications will not be considered from evaluators who have had any direct involvement in the design or implementation of the project. This may apply equally to evaluators who are associated with organizations, universities or entities that are, or have been, involved in the delivery of the project. Any previous association with the project, the Ministry of Agriculture and Environmental Protection, UNDP Serbia or other partners/stakeholders must be disclosed in the application. This applies equally to firms submitting proposals as it does to individual evaluators.

If selected, failure to make the above disclosures will be considered just grounds for immediate contract termination, without recompense. In such circumstances, all notes, reports and other documentation produced by the evaluator will be retained by UNDP.

6. APPLICATION PROCEDURES

The following are steps for on-line application:

Submit the application (as listed below) via UNDP web site www.rs.undp.org under the heading "Work with us/Vacancies":

The application should contain:

- **Cover letter** explaining why you are the most suitable candidate for the advertised position and a **brief methodology** on how you will approach and conduct the work (based or commenting on the requirements indicated in this TOR).
- **Updated P11 form** including latest experience in similar projects and updated contact details of referees (blank form can be downloaded from: http://www.undp.org.rs/download/ic/P11.doc).
- Financial Proposal* - should be provided in the document Offeror's Letter to UNDP confirming Interest and availability for the Individual Contractor that could be found at downloaded from the following link: http://www.undp.org.rs/download/ic/Confirmation.docx (only PDF will be accepted). It shall specify a total Lump Sum Amount for the tasks specified in this announcement.

Please note that the **financial proposal is all-inclusive** and shall take into account various expenses incurred by the consultant/contractor during the contract period (e.g. fee, health insurance, vaccination, office costs and any other relevant expenses related to the performance of services...). All envisaged **travel costs** must be included in the financial proposal. This includes all travel to join duty station/repatriation travel.

Payments will be made to the consultant in two instalments as follows:

1) 30% of the lump sum amount will be done upon completion of deliverable 1 in TOR;

2) 70% of the lump sum amount upon satisfactory completion of the final report and following confirmation from UNDP that the consultant has delivered on the contract obligations in a satisfactory manner.

Individual Consultants are responsible for ensuring they have **vaccinations**/inoculations when travelling to certain countries, as designated by the UN Medical Director. Consultants are also required to comply with the UN **security directives** set forth under dss.un.org

GENERAL CONDITIONS OF CONTRACTS FOR THE SERVICES OF INDIVIDUAL CONTRACTORS could be found at the following link: http://www.undp.org.rs/download/General Conditions IC.docx.

Qualified **women** and members of **minorities** are encouraged to apply.

Additional Information:

- Individual Contract (IC) will be applicable for individual consultants applying in their own capacity. If the applicant is employed by any legal entity, IC would be issued upon submission of Consent letter from the employer acknowledging the engagement with UNDP. Template of General Conditions on IC could be

found on: http://www.undp.org.rs/download/General%20Conditions%20IC.docx. Reimbursable Loan Agreement (RLA) will be applicable for applicants employed by any legal entity. Template of RLA with General Terms and Conditions could be found on: http://www.undp.org.rs/download/RLA%20with%20General%20Terms%20and%20Conditions.doc. In the case of engagement of Civil servants under IC contract modality a no-objection letter and confirmation of unpaid leave provided by the Government entity is required.

Incomplete applications will not be considered. Please make sure you have provided all requested materials

The criteria of utility, credibility, and relevance/appropriateness will be used for assessing the quality of the evaluation report:

- The report has to be written in clear language (English)
- The Executive Summary should be an extremely short chapter, highlighting the evaluation mandate, approach, key findings, conclusions and recommendations.
- The information in the report has to be complete, well structured and well presented
- The information in the report has to be reliable i.e. well documented and supported findings
- The information in the report has to addresses priority or strategic information needs
- Recommendations have to be concrete and implementable. Human rights and gender equality perspective has been taken into account

The evaluation has to be conducted in accordance with the principles outlined in the Ethical Guidelines for Evaluation. Code of conduct is enclosed as Annex I and constitutes integral part of this ToR.

APPENDIX B – MISSION ITINERARY (FOR NOVEMBER 2014 AND JANUARY-2015)

#	Activity	Stakeholder involved	Place
***November 16, 2014** (Sunday)*			
	Arrival of Mr Roland Wong		
***November 17, 2014** (Monday)*			
1	Meeting with Miroslav Tadic, Portfolio Manager, former NPD, Ms. Snezana Ostojic Paunovic, Project Assistant	UNDP	Belgrade
2	Meeting with Ms. Sandra Lazic, Senior Adviser	Department for Climate Change, Ministry of Agriculture and Environmental Protection	Belgrade
3	Meeting with Ms. Tijana Spasic, Senior Adviser, NPD	Department for EU Integration and International Cooperation	Belgrade
***November 18, 2014** (Tuesday)*			
4	Meeting with Mr. Zoran Rubinjoni, director (former Director of the Belgrade Land Development Agency)	Center for Urban Development Planning	Belgrade
5	Meeting with Mr. Petar Rokvic, Director	Biking Club “Red Star”, Belgrade	Belgrade
***November 19, 2014** (Wednesday)*			
6	Meeting with Mr. Slavisa Zivkovic, Assistant Secretary, Mr. Novica Micevic, Department Head, Ms. Andrijana Pesic, Department Head	Secretariat for Transport, City of Belgrade	Belgrade
7	Meeting with Mr. Dragan Vukovic, Advisor	Secretariat for Energy, City of Belgrade (formerly Assistant Secretary for Transport)	Belgrade
8	Meeting with Mr. Lazar Divjak, Project Assistant (former Senior Project Assistant, SUTP project)	Organization for Security and Cooperation in Europe	Belgrade
9	Meeting with Ms. Sanja Ilic, eco-driving trainings	RICO training centre	Belgrade
10	Meeting with Ms. Darinka Radojevic, Ms. Natasa Djokic and Mr. Dejan Lekic (SEPA)	Secretariat for Environmental Protection, City of Belgrade and Serbian Environmental Protection Agency (SEPA)	Belgrade
***November 20, 2014** (Thursday)*			
11	Meeting with Mr. Slobodan Misanovic, Project Manager	Public Transport Company (GSP), City of Belgrade	Belgrade

#	Activity	Stakeholder involved	Place
12	Meeting with Ms. Zdenka Sabljic, Head of the Projects Implementation Unit and Mr. Slobodan Ivanovic, Director of the Housing Sector	Land Development Agency, City of Belgrade	Belgrade
13	Skype meeting with Ms. Elena Gavrilova, GHG consultant	UNDP Serbia	Belgrade
November 21, 2014 *(Friday)*			
14	Skype meeting with Ms. Natasa Martins, former UNDP STB Project Manager	UNDP Serbia	Belgrade
15	Meeting with Ms. Milena Kozomara, UNDP Portfolio Manager	UNDP Serbia	Belgrade
16	De-briefing meeting with Miroslav Tadic, Portfolio Manager, former NPD, Ms. Snezana Ostojic Paunovic, Project Assistant	UNDP Serbia	Belgrade
November 22, 2014 *(Saturday)*			
	Departure of Mr Roland Wong from Belgrade		
April 17, 2015 *(Friday)*			
17	Skype meeting with Maria Olshanskaya, Regional Technical Advisor for UNDP-GEF Europe and CIS Regions, Miroslav Tadic, Portfolio Manager, former NPD, Ms. Snezana Ostojic Paunovic, Project Assistant	UNDP-GEF Europe and CIS Region, UNDP Serbia	Vancouver

Total number of meetings conducted: 17

APPENDIX C – LIST OF PERSONS INTERVIEWED

This is a listing of persons contacted in Belgrade (unless otherwise noted) during the Final Evaluation Period only. The Evaluator regrets any omissions to this list.

1. Mr. John O'Brien, Regional Technical Advisor, Europe and CIS regions, UNDP-GEF, Istanbul, Turkey;

2. Ms. Marina Olshanskaya, Regional Technical Advisor, Europe and CIS regions, UNDP-GEF, Istanbul, Turkey;

3. Mr. Miroslav Tadic, Portfolio Manager, Project Manager for STB Project, and former National Project Director, UNDP Serbia;

4. Ms. Snezana Ostojic Paunovic, Project Assistant, UNDP Serbia;

5. Ms. Milena Kozomara, UNDP Portfolio Manager;

6. Ms. Natasa Martins, former STB Project Manager;

7. Ms. Elena Gavrilova, GHG consultant;

8. Mr. Lazar Divjak, Project Assistant and former Senior Project Assistant, STB Project;

9. Ms. Tijana Spasic, Senior Adviser, NPD, Department for EU Integration and International Cooperation

10. Ms. Sandra Lazic, Senior Adviser, Department for Climate Change, Ministry of Agriculture and Environmental Protection;

11. Mr. Dejan Lekic, Consultant for Serbian Environmental Protection Agency (SEPA);

12. Mr. Novica Micevic, Department Head, Secretariat for Transport, City of Belgrade;

13. Ms. Andrijana Pesic, Department Head, Secretariat for Transport, City of Belgrade;

14. Mr. Slavisa Zivkovic, Assistant Secretary, Secretariat for Transport, City of Belgrade;

15. Mr. Dragan Vukovic, Advisor, Secretariat for Energy, City of Belgrade (formerly Assistant Secretary for Transport)

16. Ms. Darinka Radojevic, Secretariat for Environmental Protection, City of Belgrade;

17. Ms. Natasa Djokic Secretariat for Environmental Protection, City of Belgrade;

18. Mr. Slobodan Misanovic, Project Manager, Public Transport Company (GSP), City of Belgrade

19. Ms. Zdenka Sabljic, Head of the Projects Implementation Unit, Land Development Agency, City of Belgrade;

20. Mr. Slobodan Ivanovic, Director of the Housing Sector, Land Development Agency, City of Belgrade

21. Ms. Sanja Ilic, RICO training centre.

APPENDIX D – LIST OF DOCUMENTS REVIEWED

1. Project Document
2. PSC minutes UNDP Serbia, First Steering Board Meeting 21/4/2011 Minutes, Second Steering Board Meeting 16/5/2012 Minutes, , Third Steering Board Meeting 13/6/2013 Minutes;
3. UNDP Serbia reports:
   a) Inception Report "Sustainable Urban Transport Project". February 2011.
   b) Quarterly Progress Reports from January to March 2011 complete to July to September 2014;
   c) APR/PIR for 1 July 2010 to 30 June 2011, 1 July 2011-30 June 2012, 1 July 2012-30 June 2013; 1 July 2013-October 31, 2014;
   d) Progress Reports from May 2012 and June 2013;
   e) Mid-Term Evaluation for “Support to Sustainable Transport in the City of Belgrade”, May 30, 2013;
4. STB Reports:
   a) PARQUEEXPO, TIS.pt., Sustainable Urban Transport to the City of Belgrade: Analysis of the Urban and Transport Policy, November 2011
   b) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Overview of the Legal Framework, January 2012;
   c) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Capacity Assessment, June 2012;
   d) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Workplan for the SUTP Process, September 2012;
   e) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Communication Plan, October 2012;
   f) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Financial Resources Plan,October 2012;
   g) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Analysis of the SUTP Alignment in National Strategies, October 2012;
   h) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Baseline Case; November 2012;
   i) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade: Scenarios; November 2012;
   j) PARQUEEXPO, TIS.pt. Sustainable Urban Transport to the City of Belgrade, Final report, December 2012;
   k) MASMI, Quantitative research, Public Awareness Campaign “Let’s Cycle in Belgrade!”, March 2014;
   l) Orange Studios, Presentation on “Safe Routes to Schools”, July 2014;
   m) Rico Training Center, **Final Report for** UNDP & Belgrade Secretariat for Transport on ECOeffect Project, December 2013;
   n) Rico Training Center, Bus Driver Tests, October-November 2014;
5. ECA Sustainable Cities: Improving Energy Efficiency in Belgrade, TRACE Study, December 2012;
6. Initial National Communication under UNFCCC, Republic of Serbia, November 2010.

APPENDIX E – COMPLETED TRACKING TOOL

Tracking Tool for Climate Change Mitigation Projects (For Terminal Evaluation)

Special Notes: reporting on lifetime emissions avoided
Lifetime direct GHG emissions avoided: Lifetime direct GHG emissions avoided are the emissions reductions attributable to the investments made **during the project's supervised implementation period**, totaled over the respective lifetime of the investments. **Lifetime direct post-project emissions avoided:** Lifetime direct post-project emissions avoided are the emissions reductions attributable to the investments made outside the project's supervised implementation period, but supported by financial facilities put in place by the GEF project, totaled over the respective lifetime of the investments. These financial facilities will still be operational after the project ends, such as partial credit guarantee facilities, risk mitigation facilities, or revolving funds. **Lifetime indirect GHG emissions avoided (top-down and bottom-up):** indirect emissions reductions are those attributable to the long-term outcomes of the GEF activities that remove barriers, such as capacity building, innovation, catalytic action for replication. Please refer to the Manual for Calculating GHG Benefits of GEF Projects. Manual for Energy Efficiency and Renewable Energy Projects Manual for Transportation Projects For LULUCF projects, the definitions of "lifetime direct and indirect" apply. Lifetime length is defined to be 20 years, unless a different number of years is deemed appropriate. For emission or removal factors (tonnes of CO2eq per hectare per year), use IPCC defaults or country specific factors.

General Data	Results at Terminal Evaluation	Notes
Project Title	Support to Sustainable Transport in the City of Belgrade	
GEF ID	3759	
Agency Project ID	3781	
Country	Serbia	
Region	ECA	
GEF Agency	UNDP	
Date of Council/CEO Approval	March 3, 2010	**Month DD, YYYY (e.g., May 12, 2010)**
GEF Grant (US$)	950,000	
Date of submission of the tracking tool	December 16, 2014	**Month DD, YYYY (e.g., May 12, 2010)**
Is the project consistent with the priorities identified in National Communications, Technology Needs Assessment, or other Enabling Activities under the UNFCCC?	1	**Yes = 1, No = 0**
Is the project linked to carbon finance?	0	**Yes = 1, No = 0**
Cumulative cofinancing realized (US$)	3,299,000	
Cumulative additional resources mobilized (US$)	-	**additional resources means beyond the cofinancing committed at CEO endorsement**

Objective 4: Transport and Urban Systems		
Please specify if the project targets any of the following areas		
Bus rapid transit	0	Yes = 1, No = 0
Other mass transit (e.g., light rail, heavy rail, water or other mass transit; excluding regular bus or minibus)	1	Yes = 1, No = 0
Logistics management	0	Yes = 1, No = 0
Transport efficiency (e.g., vehicle, fuel, network efficiency)	1	Yes = 1, No = 0
Non-motorized transport (NMT)	1	Yes = 1, No = 0
Travel demand management	1	Yes = 1, No = 0
Comprehensive transport initiatives (Involving the coordination of multiple strategies from different transportation sub-sectors)	1	Yes = 1, No = 0
Sustainable urban initiatives	1	Yes = 1, No = 0
Policy and regulatory framework	3	0: not an objective/component 1: no policy/regulation/strategy in place 2: policy/regulation/strategy discussed and proposed 3: policy/regulation/strategy proposed but not adopted 4: policy/regulation/strategy adopted but not enforced 5: policy/regulation/strategy enforced
Establishment of financial facilities (e.g., credit lines, risk guarantees, revolving funds)	0	0: not an objective/component 1: no facility in place 2: facilities discussed and proposed 3: facilities proposed but not operationalized/funded 4: facilities operationalized/funded but have no demand 5: facilities operationalized/funded and have sufficient demand
Capacity building	4	0: not an objective/component 1: no capacity built 2: information disseminated/awareness raised 3: training delivered 4: institutional/human capacity strengthened 5: institutional/human capacity utilized and sustained
Length of public rapid transit (PRT)	-	km
Length of non-motorized transport (NMT)	78	km
Number of lower GHG emission vehicles	400	
Number of people benefiting from the improved transport and urban systems	1,160,000	Benefits for safe passge to schools only benefits children and their parents who have safer passage to school (estimated to be 1.16 million in Belgrade based on demongraphic information from 2015 CIA World Factbook and theodroa.com). Cycling paths benefit only fit people at this stage, and eco-driving only saves fuel with direct benefits for the government of $2 million annually. These numbers may grow later.
Lifetime direct GHG emissions avoided	1,090	tonnes CO2eq (see Special Notes above)
Lifetime direct post-project GHG emissions avoided	224,125	tonnes CO2eq (see Special Notes above)
Lifetime indirect GHG emissions avoided (bottom-up)	63,000	tonnes CO2eq (see Special Notes above)
Lifetime indirect GHG emissions avoided (top-down)	96,104	tonnes CO2eq (see Special Notes above)

APPENDIX F – LOGICAL FRAMEWORK MATRIX (FROM FEBRUARY 2011)

Project Strategy	Objectively verifiable indicators				
Goal Create a sustainable transport system in Belgrade					
	Indicator	**Baseline**	**Target**	**Sources of Verification**	**Risks and Assumptions**
Objective					
Reduce local and greenhouse gas emissions associated with the transport system in Belgrade while improving access	Annual emissions from transport sector in the course of project period. Average daily commute time.	Greenhouse gas emissions from transport sector in Belgrade increase by about 3 percent per year. Average daily commute time increases by 10-20% during project period.	Annual emissions during project period stay nearly constant or decline slightly in each project year. Average daily commute time declines during project period. It is about 5% lower than 2007 levels by 2012 and about 10% lower by 2014.	Emissions inventory of transport modes and modelling. Travel demand surveys; customer satisfaction surveys.	Implementation of package of measures
Outcomes 1.0	**Indicator**	**Baseline**	**Target**	**Sources of Verification**	**Risks and Assumptions**
Integrated land use and urban transport planning at the metropolitan level 1.1 Development of integrated land-use/transport plans, with mixed use, high-density zoning along major transport corridors, discouraging low-density, automobile dependent development at the urban fringe	Completion of integrated land-use/transport planning	Sprawl in Novi Belgrade and areas south of the central business district, leading to increased car-dependence, congestion, local air pollution and greenhouse gas emissions	Strategic planning to coordinate public transport access with mixed use zoning in brownfield and greenfield development as indicated by the existence of a strategic planning document by the end of the project.	Review of planning documents	Commitment by urban planning and transport planning agencies to work together Availability of expertise drawing on best-practices in integrated land-use/transport planning

1.2 Working group on transport and land-use planning, with external consultations on transit corridor planning.	Completion of review of modelling studies and analyses of alternative urban forms	Inadequate understanding of travel demand and demand growth	Improved understanding of travel demand, modal use, origins and destinations, travel demand growth. This means improved strategies for integrated land-use/transport planning as evidenced by an analysis of the recommendations of the working group on transport and the extent to which these recommendations have been implemented by the end of the project.	Data generation on travel demand, especially along main transport corridors.	Data and report quality
1.3 International conference on EU transport and regional policies with regard to the sustainable urban development and mobility hosted in Belgrade	Completion of the International Conference and recommendations following the conference	The National transport policy needs alignment with the EU transport strategies that provides the framework for developing the urban transport plans.	Exchange of knowledge and best practice from other EU metropolises and transfer of latest developments and policies	• Training material from the conference • Project Reports • Recommendations	Availability of international transport/regional development experts to participate in the conference.
Outcomes 2.0	**Indicator**	**Baseline**	**Target**	**Sources of Verification**	**Risks and Assumptions**
Promotion of the cycling and walking transport mode **2.1 Preparation of GPRS cycling maps**	Completion of the GPRS maps and availability to do web-upload	A cycling study and infrastructure in New Belgrade existing, but without being efficiently used.	Maps that will facilitate and stimulate the use of bicycles throughout the City	• GPRS maps for cycling in Belgrade	Existence of mature data to be used for the GPRS maps.

2.2 Preparation of a cycling web-site	Completion of the web-site with all contents to promote cycling including the GPRS maps	Lack of integrated approach in promoting the cycling mode but also providing the cyclists with all the rights as active and equal members	A web platform that will serve the cyclists in exchange of information and knowledge	• Web site on cycling	Lack of willingness and understanding by the City Secretariat to maintain the web after 2014 (closing of the project)
2.3 Cycling campaign "Let's cycle in Belgrade"	Completion of the public awareness campaign and monitoring study	Lack of promotion and advertising on the importance and benefits of using the bicycles	The awareness about the cycling opportunities in Belgrade not only for recreational purposes but also as a transport mean throughout the city	• Data available in project reports • Monitoring study Results from questionnaires and public enquiry	Delays in the project" Bike-share" that is supposed to be also covered partially by this campaign
2.4 European Mobility Week	Completion of an annual event promoting the mobility	Belgrade has not participated so far in an European initiative on mobility that takes place every September in which many major capitals form the European continent participate.	Belgrade by promoting the sustainable urban mobility will be promoted and find itself on the European map of cities that keep the urban mobility and climate change high on their urban local agendas.	• Project Reports • Promotion material	Commitment by the City Secretariat and Authorities to support the event(s)
Outcomes 3.0	**Indicator**	**Baseline**	**Target**	**Sources of Verification**	**Risks and Assumptions**

Safe and Sound to School **3.1 Study on schools to participate in the programme**	Completion of a study on selected schools to participate in the programme	Lack of integrated approach in promoting and facilitating the green and safe ways for the children to school. No study exists so far, nor is it mainstreamed in any urban transport document.	A study prepared by identifying and describing the best possible options applicable in the City to use walking and cycling for the pupils on the ways to school. Training materials developed to be used in the primary education in knowledge build-up. The study to identify 15 schools for which paths will be marked and pedibuses organised to walk-out the children to their classrooms.	• Study on 15 schools in Belgrade and the safest ways to reach them	Commitment by the city and state authorities to support the idea and actively participate. Gain confidence at the parents group to let the children participate in the program
3.2 Workshops with children "Cycle labs"	Training syllabus and reports of workshops with children	Lack of technical skills at the entire population in providing small repairing on the bicycles if needed and occurred suddenly while driving.	The skills of the youngest population and their parents developed in doing simple repairing and maintenance of the bicycles.	• Project reports • Monitoring study	Lack of belief by the parents to let their children attend the Cycle Labs trainings.
3.3 Public Awareness Campaign "Safe Routes to Schools"	Completion of a public awareness campaign	Missing awareness and knowledge amongst the teachers, parents and children on the benefits and aspects of going to school by bicycle or walking instead of cars.	Public debates and sessions with parents in the selected schools to increase their knowledge	• Public enquiry • Brochures • Leaflets • Newsletters • Interviews on press/e-media	Lack of interest by the parents to participate into the public debates.
Outcomes 4.0	**Indicator**	**Baseline**	**Target**	**Sources of Verification**	**Risks and Assumptions**

Capacity Building **4.1 Train the Trainers Programme on eco-driving for the Public Transport Company of Belgrade**	Completion of training programmes	The education system in Serbia for new drivers does not include any lessons on eco-driving. The skills of professional drivers in applying these techniques are practically non-existent.	A training syllabus developed to serve as abuse and become regular part of the new driver courses as well as the high-school students. Trainers amongst the professional municipal drivers skilled in providing education to their colleagues on eco-driving. Dissemination of the knowledge increased and sustainability provided.	• Training programme and certificates awarded • Questionnaires	Low interest by the participating partners in appointing attendants for the Train the trainer courses.
4.2 Monitoring the effects of the Eco-drive trainings	Completion of Monitoring effects from the first drivers trained by the trainers	The lack of awareness on eco-driving is also contributing to missing convictions by the municipal authorities and professional drivers in the positive effects of applying these skills.	Study to show and express through figures the effects of the eco-driving.	• Monitoring report • Project reports	Lack of readiness to continue building on the capacities and creating a pool of skilled professional drivers. Missing understanding on the importance of eco-driving and promoting it further into the educational plans.

4.3 Case-study guide to aid replication of project elements	Completion of case study guide	No new capacity development among transport managers and planners No case study and guidelines for wider adoption	Draft Case Study guide developed by the time of mid-term evaluation and final Case Study Guide developed and widely disseminated before the end of the project. Existence in Serbia of new indicators of transport effectiveness, based on sustainability have been developed by the end of the project At least two workshops held Belgrade and four workshops in other cities in Serbia on the outcomes and on lessons learned of this project before the end of the project At least two other cities in Serbia have adopted similar sustainable transport activities to the ones which are outlined in this project by the end of the project	Reviews of capacity by project evaluation team Customer satisfaction surveys Assessment by Evaluation Team Assessment by regulators Assessment by national-level policy makers	Availability of skilled trainers. Willingness to change institutional culture Availability of skilled trainers. Willingness to change institutional culture Availability of skilled analysts. Successful implementation of project Willingness to change institutional culture

APPENDIX G– EVALUATION CONSULTANT AGREEMENT FORM

Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Evaluation Consultant Agreement Form[52]

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: __Roland Wong_____

Name of Consultancy Organization (where relevant)**:** _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *Surrey, BC , Canada* on *July 26, 2015*

Signature: 

[52]www.unevaluation.org/unegcodeofconduct