





# **United Nations Development Programme**

## Terminal Evaluation of UNDP-Implemented, GEF-Financed Project: South Africa – Sustainable Public Transport and Sport – A 2010 Opportunity (PIMS: 3276)

# **Terminal Evaluation Report**

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December 2014

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## SYNOPSIS

**Title of UNDP-implemented, GEF-financed project:** Sustainable Public Transport – A 2010 Opportunity (SPTS)

UNDP Project ID: PIMS 3276

GEF Project ID: 2604

Evaluation time frame: July 2008 to December 2013

Date of evaluation report: 8 December 2014

Region and Countries included in the project: South Africa

**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 Agency: Department of Transport, Government of South Africa (under NIM modality)

**Evaluation team members:** Mr Roland Wong, International Consultant

#### Acknowledgements:

The Evaluator wishes to acknowledge with gratitude the time and effort expended by all project participants and stakeholders during the course of terminal evaluation. In particular, the Evaluation Team wishes to thank Ms. Maria Mbengashe from UNDP South Africa, Mr. David Ingham, the former Project Coordinator and Mr. Abram Chego from the South African Department of Transport for arranging mission meetings and travel to the various sites around South Africa. The Evaluator would also like to thank all stakeholders including the Department of Transport, Rustenburg Rapid Transport, the City of Johannesburg and Rea Vaya Transport, the City of Cape Town, Mr. Richard Gordge (Transport Futures) and Mr. Tobie Pretorious (Gibb Engineering and Architecture) for their hospitality, informative and passionate discussions on their experiences in implementing the SPTS Project; the passion, insights, and candid perspectives of all persons interviewed have added value to the evaluation process. I hope that this report can contribute towards further support to improve the urban conditions of South African cities and an improved quality of life for the people of South Africa.

## ABBREVIATIONS

| Acronym         | Meaning  |
|-----------------|--|
| AFDB            | African Development Bank   |
| APR             | Annual Project Report  |
| AWP             | Annual Work Programme  |
| BRT             | Bus Rapid Transit  |
| B/C             | Benefit-cost ratio   |
| CBD             | Central Business District  |
| CITP            | Comprehensive Integrated Transport Plan                                  |
| CO              | Carbon Monoxide  |
| CO <sub>2</sub> | Carbon Dioxide   |
| COD             | Centre of Development within DoT   |
| CoJ             | City of Johannesburg   |
| DBSA            | Development Bank of Southern Africa                                      |
| DEAT            | National Department of Environment and Tourism, Republic of South Africa |
| DLPG            | National Department of Local and Provincial Government, Republic of      |
|                 | South Africa   |
| DME             | National Department of Minerals and Energy, Republic of South Africa     |
| DoT             | National Department of Transport, Republic of South Africa               |
| DoSR            | National Department of Sport and Recreation, Republic of South Africa    |
| DoST            | National Department of Science and Technology, Republic of South Africa  |
| EOP             | End of Project   |
| FIFA            | Federation Internationale de Football Association                        |
| GDP             | Gross Domestic Product   |
| GEF             | Global Environment Facility  |
| GHG             | Greenhouse Gas   |
| GoSA            | Government of South Africa   |
| HOV             | High Occupancy Vehicle   |
| IDP             | Integrated Development Plan  |
| IPTS            | Integrated Public Transport System (Nelson Mandela Bay)                  |
| IRPTN           | Integrated Rapid Public Transport Network                                |
| ITP             | Integrated Transport Plan  |
| LEP             | Large Employer Programme   |
| M&E             | Monitoring and Evaluation  |
| MMIPT           | Manguang Multimodal Integrated Public Transport                          |
| MoMb            | Municipality of Mbombela   |
| MOU             | Memorandum of Understanding  |
| NIM             | National Implementation Modality   |
| NLTSF           | National Land Transport Strategic Framework 2006                         |
| NLTTA           | National Land Transport Transition Act                                   |
| NMB             | Nelson Mandela Bay   |
| NMT             | Non-motorised Transport  |
| NOx             | Nitrogen Oxides  |
| NPD             | National Project Director  |
| PC              | Project Coordinator  |
| PDF             | Project Development Facility   |
| PIR             | Project Inception Report / Project Implementation Review                 |

| Acronym            | Meaning  |
|--------------------|--|
| PIURMP             | Polokwane Integrated Urban Realm and Movement Plan         |
| PM                 | Particulate Matter   |
| PMU                | Project Management Unit                                    |
| PPM                | Project Planning Matrix                                    |
| PPP                | Public Private Partnership                                 |
| PRASA              | Public Railway Agency for South Africa                     |
| PSC                | Project Steering Committee                                 |
| PTIF               | Public Transport Infrastructure Fund, renamed as           |
| PTSIG              | Public Transport Systems and Infrastructure Grant          |
| PTOF               | Public Transit Operational Fund                            |
| RCU                | Regional Coordination Unit                                 |
| RMTC               | Road Traffic Management Corporation                        |
| SALGA              | South African Local Government Association                 |
| SATC               | South Africa Transport Conference                          |
| SITA               | State Information Technical Agency of GoSA                 |
| SOP                | Standard operational plans                                 |
| SOx                | Sulphur Oxides   |
| SPTS               | Sustainable Public Transport and Sport, a 2010 Opportunity |
| STAP               | Scientific and Technical Advisory Panel                    |
| SUT                | Sustainable urban transport                                |
| TAA                | Transport Administrative Agency                            |
| tCO <sub>2eq</sub> | Tonnes of CO <sub>2</sub> equivalent                       |
| TDM                | Travel Demand Management                                   |
| TEEMP              | Transport Emissions Evaluation Models for Projects         |
| UNDP               | United Nations Development Programme                       |
| UNDP CO            | United Nations Development Programme Country Office        |
| UNFCCC             | United Nations Framework Convention on Climate Change      |
| UNV                | United Nations Volunteers                                  |
| USD                | United States Dollars (= 11.0 ZAR) <sup>1</sup>            |
| VKMT               | Vehicle-kilometres of travel                               |
| vph                | Vehicles per hour  |
| WC                 | 2010 FIFA World Cup  |
| WWF                | World Wildlife Fund  |
| ZAR                | South African Rand   |

<sup>&</sup>lt;sup>1</sup> http://treasury.un.org/operationalrates/OperationalRates.aspx.

## EXECUTIVE SUMMARY

This report summarises the findings of the Terminal Evaluation Mission conducted during the period of August 25 to September 8, 2014 for the UNDP-implemented, GEF-financed project entitled: "Sustainable Public Transport and Sport, a 2010 Opportunity" (hereby referred to as SPTS or the Project), that received a USD 10,973,000 grant from the Global Environment Facility (GEF).

## **Project Description**

The Project was developed in 2006-08 by UNDP as a nationally implemented (NIM) project. The Project Document (ProDoc) provides details of the GEF contribution to the South African Department of Transport (DoT) to use the 2010 FIFA World Cup as a catalyst for fundamental and appropriate changes to the country's public transport. GEF Project activities included assistance to seven cities hosting FIFA World Cup games, ranging from technical assistance in the designs of public transport systems to actual investments in the systems, and capacity building to raise awareness of sustainable transport and to strengthen the knowledge base for local transport professional engineers and planners. The ProDoc was signed on 2 January 2008, with Project activities commencing on 1 July 2008 with the recruitment of the Project Coordinator and an expected Project terminal date of September 30, 2012.

The legacy of apartheid in South Africa resulted in a dispersed pattern of land use with lowerincome residents living far from the town centres and other employment nodes in either townships or ex-homelands. It also left excellent urban road networks, mainly to serve the wealthier suburbs. As the economy of South Africa has improved over the past decade, there has been an increase in the use of private cars amongst all sections of society. This has created more difficulties in urban travel, resulting in traffic congestion that has become a frequent occurrence in all cities of South Africa.

The SPTS Project was designed to augment DoT assistance (in part financed from the National Treasury through the Public Transport Systems and Infrastructure Grants, or PTSIG) to the various provincial and municipal governments that were involved in the planning and implementation of effective, sustainable and environment-friendly urban public transport systems. The idea of using the 2010 FIFA World Cup events was to "showcase" modern public transport systems as sustainable transport. In addition, the Project was designed to sustain development of modern public transport systems through strengthening the DoT and building its capacity to sustain the development of modern public transport well past the conclusion of this Project.

## **Evaluation Ratings**

The overall rating of the Project is Satisfactory (S). This is based on the following outcomes:

- Successful use of all dedicated bus lanes, NMT facilities and TDM measures during the 2010 World Cup (WC) events that received support from SPTS;
- Meeting the original targets for GHG emission reductions of 423,000 tonnes CO<sub>2eq</sub> over a 10-year period;

- The significant contribution of SPTS to the successful operation of Rea Vaya Bus Rapid Transit (BRT) system in Johannesburg that has resulted in a high-profile and functional BRT system;
- The lack of a functional Integrated Public Transport System (IPTS) system in Nelson Mandela Bay (NMB) due to the failure of both the City Government of NMB and existing public transport operators to reach an agreement, despite SPTS support to assist existing bus and taxi operators in establishing and operating the business entities for the IPTS;
- Lack of proper usage of the HOV lane in Mbombela to provide priority to high-occupancy vehicles through congested areas despite SPTS support for awareness-raising of the proper usage of the HOV lane which was not sustained after the construction period of the HOV lane;
- Evidence of modal shifts from informal mini-buses to walking in Polokwane, Manguang and Rustenburg where NMT facilities were constructed;
- Continued growth in the use of park-and-ride facilities and ride-sharing in Cape Town in an
  effort to reduce private car journeys from the outlying suburbs of the city to the Central
  Business District (CBD). Both of these measures received design and implementation plan
  support from SPTS;
- Completion of academic studies on topics closely related to sustainable transport in South Africa, and notably related to some of the Project interventions associated with Outcome 1;
- Delivery of training programmes related to sustainable transport and road safety with positive feedback from participants.

#### The overall Project sustainability rating is Moderately Likely (ML). This is primarily due to:

- The high levels of subsidies required to sustain operations of most of the modern transport systems being developed. While there is some relief for operational budgets from the Public Transit Operational Fund (PTOF), the Fund provides only 70% of operational costs for the first two years of operation;
- The continued need for strengthened capacity at the city and provincial levels of government to plan, develop and implement sustainable transport projects (with the exception of the large cities such as Johannesburg and Cape Town). The level of sustainable transport knowledge is still low at these levels; this is improving, however, based on the experience they are gathering from the operation and management of the systems built for the 2010 World Cup (WC);
- The substantial risks of not integrating displaced public transport service providers into a new public transport entity. Advanced negotiating skills are required to overcome complex issues of integration that requires building levels of trust between the existing public transit providers and management staff of the transport entities;
- The high priority placed by the Government of South Africa (GoSA) on developing public transit and the availability of capital budgets from PTSIG to continue development of sustainable transport infrastructure and systems for cities in South Africa.

Table A provides a summary of the terminal evaluation of SPTS.

## Conclusions

• Sustainable public transport is a key policy direction of the Department of Transport's Strategic Plan for 2013/14. Certain activities of the SPTS Project can viewed as critical to the demonstration of a functional world-class transport system for South Africa that can lead to replication of other similar projects in South Africa. The impacts of the Rea Vaya

BRT, for example, are demonstrating the economic benefits, as was the goal of the Government in implementing this Strategic Plan. The sustained growth of these systems, however, is still constrained by a number of factors, namely:

- The possibility of limited funds for capital works in the near future;
- Limited capacity to plan, develop, implement, operate and maintain new sustainable transport systems in the smaller cities of South Africa; and
- The uncertainty over sourcing operational budget shortfalls for all systems in the long term.

| 1. Monitoring and Evaluation  | Rating   | 2. IA & EA Execution  | Rating   |
|---|--|---|--|
| M&E design at entry   | 5  | Quality of UNDP Implementation  | 4  |
| M&E Plan Implementation   | 5  | Quality of Execution - Executing  | 5  |
|   |  | Agency  |  |
| Overall quality of M&E  | 5  | Overall quality of Implementation   | 4  |
|   |  | / Execution (Implementing   |  |
|   |  | agency)   |  |
|   |  |   |  |
| 3. Assessment of Outcomes   | Rating   | 4. Sustainability <sup>3</sup>  | Rating   |
| 3. Assessment of Outcomes<br>Relevance  | Rating<br>5  | <b>4. Sustainability</b> <sup>3</sup><br>Financial resources  | Rating<br>3  |
| 3. Assessment of Outcomes<br>Relevance<br>Effectiveness   | <b>Rating</b><br>5<br>4.7                                    | <b>4. Sustainability</b> <sup>3</sup><br>Financial resources<br>Socio-political   | Rating<br>3<br>3                                       |
| 3. Assessment of Outcomes<br>Relevance<br>Effectiveness<br>Efficiency                                   | <b>Rating</b><br>5<br>4.7<br>4.6                             | <b>4. Sustainability</b> <sup>3</sup><br>Financial resources<br>Socio-political<br>Institutional framework and                                | Rating333  |
| 3. Assessment of Outcomes<br>Relevance<br>Effectiveness<br>Efficiency                                   | <b>Rating</b><br>5<br>4.7<br>4.6                             | <b>4. Sustainability</b> <sup>3</sup><br>Financial resources<br>Socio-political<br>Institutional framework and<br>governance                  | Rating333  |
| 3. Assessment of Outcomes<br>Relevance<br>Effectiveness<br>Efficiency<br>Overall Project Outcome Rating | Rating           5           4.7           4.6           4.7 | <b>4. Sustainability</b> <sup>3</sup><br>Financial resources<br>Socio-political<br>Institutional framework and<br>governance<br>Environmental | Rating           3           3           3           4 |

#### Table A: Evaluation Ratings<sup>2</sup>

As such, the sustained development of sustainable transport in South Africa needs to overcome issues of paying the high cost of developing modern and sustainable transport systems through its ability to reduce or eliminate subsidies into the operation of new systems. Since most of these systems are to be subsidized through municipal budgets, reduction of subsidies could be achieved through increased economic benefits, and the realisation of operational and energy efficiencies within the system as well as other municipal operating budgets.

• The commencement of SPTS only two years prior to the 2010 FIFA World Cup event had the effect of limiting the impact of this Project. The approval of the SPTS PDF-B Grant was in January 2005; however, the "loss" of 17 months from January 2005 to June 2006 contributed the late start-up date of the Project in July 2008. The Project commenced in July 2008, during an intense period of development for counterpart personnel. This constrained the ability of SPTS to function as designed. This included the inability of the Project to properly establish its management systems, the lack of willingness of stakeholders to attend Technical Advisory Committee meetings (forums for venue cities to

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> 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.

share experiences), advance capacity building efforts at the local levels, and undertake baseline surveys of transport conditions prior to the sustainable transport interventions;

- The Project, however, did have a major impact on the Rea Vaya BRT system. The advisory services provided with SPTS resources to the Johannesburg mini-bus taxi industry were a critical input into the success and sustained operation of the Rea Vaya BRT. This Project assistance should be considered a model example of donor assistance to a sustainable transport development. The success of integrating displaced and informal public transport service providers in Johannesburg provides an excellent example of the effort required to undertake complex and sensitive negotiations. The key to the success of these negotiations appears to be early stakeholder engagement and building several layers of trust in the relationships between the negotiating parties. This resulted in the emergence of a "BRT champion" from the mini-taxi industry, resulting in a most desirable outcome. According to a number of persons familiar with the situation with the Nelson Mandela Bay IPTS, the failure to reach an agreed settlement between the displaced minibus taxi association and the City was linked to a level of mistrust developed over the long, protracted negotiation process;
- An important conclusion drawn in the post-project evaluation of the Rea Vaya BRT is the positive economic impact of the system. Notwithstanding the poor transport economics of Phase 1A of the Rea Vaya BRT, with a 48% occupancy rate and subsidies of higher than 50% into the system, there are a number of wide-ranging benefits of the system:
  - Safe and regulated transport to the areas served by Rea Vaya;
  - Creation of a number of higher-quality jobs within the BRT company;
  - Major contribution to the local GDP, and an increase in household incomes of the areas served by the system;
  - Civic pride of the area.

The creation of this environment is certain to attract investment and businesses to real estate along these routes. This will result in urban densification that will increase land values and generate economic benefits. These findings are important as Johannesburg and other cities, under the 2007 Public Transport Strategy and Action Plan, seek validation of their projects to increase their networks of BRT and complementary routes. One of the routes now under consideration in Johannesburg is the CBD-Sandton route, which is projected to have occupancies of over 90% as it will link two business hubs; as designed with high occupancies in both directions, the revenues from this route can offset some of the subsidies of the Phase 1A and 1B routes. Continued development of these corridors with quality public transit will continue to attract people to these areas, generate economic activities, and create demand for quality public transport in favour of trips by private car, thereby reducing GHG emissions;

 Aside from BRT and transport systems, the growth of park-and-ride facilities and the use of rail as an urban travel mode, as piloted in Cape Town, are promising. With rail infrastructure already in place, the incremental cost of park-and-ride is attractive. A constraint to further growth appears to be improvement of the passenger rail cars that is under the national Public Railway Agency for South Africa (PRASA). An improvement of the quality of these passenger cars would attract more riders and further lower the carbon intensities of urban travel in Cape Town;

- The strengthening of local and municipal government capacities is still in need, notably in the areas of sustainable transport planning and green urban development. As economic growth occurs around the modernised transport routes, the capacities of these governments will become even more strained in managing this economic growth. Moreover, the national government is encouraging local and municipal governments to seek new revenue streams to reduce subsidy payments to modern public transport systems; these levels of government, however, are unlikely to have the capacity to generate concepts for implementing actions to reduce municipal operating budgets, such as green urban development and sustainable transport, that would free up funds for public transport subsidies. An example of this would be energy efficiency or renewable energy programmes applied to municipal assets that would reduce energy costs associated with public buildings;
- Accompanying the need to build local and municipal government capacities is the continuation of on-the-job training programme initiated by SPTS as well as growth of the academic training for sustainable transport planning and green urban development, both of which are viewed as crucial to South Africa's ability to fully realise its vision of modernised transport systems as a means for economic growth.
- The Department of Transport (DoT) web portal for sustainable transport information dissemination has still not been open to the public at the time of writing of this report. Delays in the opening of the portal to the public are frustrating given the high level of interest in sustainable transport generated by GoSA programmes at this time.

### Recommendations

Recommendation 1: The DoT still needs to strengthen its programmes to assist in the capacity building of provincial and municipal governments to plan, design, implement, operate and maintain sustainable transport systems in smaller cities in South Africa. This would enable these governments to become more responsive to the challenges of sustaining their new transport systems, and raising funds for transport planning and further development of sustainable transport and green urban development. This would entail the design and conducting of transport surveys necessary to collect information on passenger movements in a city, such as the numbers walking, taking public transit, using private cars, as well as distances of the journeys, fuel used for urban travel and travel patterns.

**Recommendation 2: Strengthen planning of all transport projects at the local level, where** <u>capacities for transport planning and project implementation are weak.</u> Many successful BRT and sustainable transport projects take at least 3 years of planning. Building capacities of those municipalities where transport planning capacities are weak could take the form of additional training and upgrades to modern tools and software for simulating traffic flow conditions. This strengthened capacity will improve the effectiveness of PTSIG and PTOF funds spent on sustainable transport systems.

Recommendation 3: The GoSA and DoT should also assist provincial and municipal governments in responding to the challenges of sustaining their new transport systems through identification of new revenue streams related to reducing municipal operational costs and green urban development. This would entail a review of municipal expenditures to

identify opportunities for reducing municipal operational costs through a holistic approach to green urban development. This may entail the development of 'joined up' programmes for energy efficiency, renewable energy development, reducing water consumption, promotion of green construction and building materials, surface water management, green infrastructure (i.e. urban parks forests and wetlands) and waste management, all of which can provide cost savings to municipal operating budgets. These cost reductions can augment infrastructure or operational funding for sustainable transport systems to encourage economic development and increase municipal revenue streams.

**Recommendation 4: Preparation of GEF projects involving high-profile sporting events needs to be mindful of the project start date to ensure the impact of the GEF project can be maximised.** Projects that do not commence with sufficient advance time of the event represent a substantial risk. Most cities with these high-profile events, such as the Summer or Winter Olympics or the FIFA World Cup, undertake their preparations 4 to 6 years in advance of the scheduled events. This should be sufficient time for the preparation of a GEF project, provided the officers developing the project understand the importance of having the project fully approved and under implementation at least 3 years in advance of the dates of the actual sporting event. Any delays in the start-up dates for these types of projects will only diminish the importance and profile of these projects.

### Lessons Learned

Key lessons from the SPTS Project include:

- Project preparations associated with high-profile sporting events need to highlight the substantial risk of starting a project too late. In the case of SPTS, its start-up just two years prior to the 2010 WC events did not allow the Project to be more influential in development of sustainable transport in South Africa. Fortunately, SPTS had a very competent Project Coordinator who managed to adaptively change Project activities to align with ongoing activities of the GoSA and support sustainable transport development in advance of the 2010 WC events;
- Staffing of large UNDP-implemented, GEF-financed projects with a range of activities requires a full time Project Manager or Coordinator with a strong background related to the technical discipline of the project. In the case of SPTS, the Project Coordinator had a strong background to manage such a complex project and its stakeholders, and managed to leverage his network of transport contacts to provide additional profile to sustainable transport issues and development in South Africa;
- Raising awareness of a sustainable transport measure needs to be conducted throughout the Project activity, but most importantly during the use of the sustainable transport measure. In the case of the Mbombela HOV lane, Project awareness-raising efforts were conducted during the construction of the HOV lane. When the lane became operational, the messaging of the purpose of the HOV lane seemed to be lost.

## **Best Practices**

The development of the Rea Vaya BRT demonstrates the principles of effective stakeholder engagement and ensuring those affected by a modernised transport system are integrated within the new transport system. The best practice that can be derived from this experience

would be to budget adequate lead time and resources to secure the services of expertise that both the municipal government and affected public transit operators can trust. Insufficient resources and time will lead to rushed decisions, errors in judgment and the seeds of mistrust in very sensitive negotiations. The SPTS design for the Johannesburg activity of Component 1 recognised this aspect from the valuable lessons learned from the development of the Transmilenio BRT and applied them to the development of the Rea Vaya BRT. In contrast, the NMB BRT component of the IPTS adopted a "big-bang" approach which significantly underestimated the length and complexity of the forthcoming negotiations with the affected mini-bus and taxi associations.

## 1. INTRODUCTION

This report summarises the findings of the Terminal Evaluation Mission conducted during the period of August 25 to September 5, 2014 for the UNDP-implemented, GEF-financed Project entitled "Sustainable Public Transport and Sport, a 2010 Opportunity" (hereafter referred to as SPTS or the Project), that received a USD 10,973,000 grant from the Global Environment Facility (GEF).

The Project was developed in 2006-08 by UNDP as what was then termed a nationally executed (NEX) project and what is now referred to as a nationally implemented (NIM) project. The Project Document (ProDoc) provides details of the GEF contribution to the South African Department of Transport (DoT) to use the 2010 FIFA World Cup as a catalyst for fundamental and appropriate changes to the country's public transport. GEF Project activities included assistance to seven cities<sup>4</sup> hosting FIFA Cup games, ranging from technical assistance in the designs of public transport systems, actual investments in the systems and capacity building to raise awareness of sustainable transport to strengthening the knowledge base for local transport professional engineers and planners.

The Project Document was signed on 2 January 2008, with Project activities beginning on 1 April 2008 with the commencement of the process to recruit a Project Coordinator and an expected Project terminal date of March 31, 2012. Three no-cost extensions were granted extending the Project to December 31, 2013<sup>5</sup>.

## 1.1 Background

The legacy of apartheid in South Africa resulted in a dispersed pattern of land use, with lower-income residents living far from the town centres and other employment nodes in either townships or ex-homelands. It also left excellent urban road networks, mainly to serve the wealthier suburbs. As the economy of South Africa has improved over the past decade, there has been an increase in the use of private cars amongst all sectors of society. This has created more difficulties in urban travel, resulting in traffic congestion that has become a frequent occurrence in all cities of South Africa. As an example, car ownership in Cape Town rose from 278 to 302 cars per 1,000 population between 2009 and 2013, equivalent to a 2% rise annually with a 0% increase in road space<sup>6</sup>.

The SPTS Project was designed to augment DoT assistance (in part financed from the National Treasury through the Public Transport Systems and Infrastructure Grants, or PTSIG) to the various provincial and municipal governments that were involved in the planning and implementation of effective, sustainable and environment-friendly urban public transport systems. The idea of using the 2010 FIFA World Cup matches was to

<sup>&</sup>lt;sup>4</sup> This included Johannesburg, Cape Town, Nelson Mandela Bay (formerly known as Port Elizabeth), Mbombela (formerly known as Nelspruit), Polokwane, Manguang (formerly known as Bloemfontein) and Rustenburg.

<sup>&</sup>lt;sup>5</sup> The first extension was issued in January 2012 for 6 months, to allow completion of training of young professionals and further time to reach agreement on operational and business plans for the NMBM IPTS with existing bus and taxi operators. A second extension of 9 months was granted in September 2012 due to delays in procuring a training and mentoring consultant to support young professionals at District Municipalities, and continued delays with implementation of the NMBM IPTS, and allowance of additional time for the Polokwane Integrated Urban Realm and Movement Plan (PIURMP) activity initiated in Polokwane. A third no-cost extension was approved in April 2013 for another 6 months to complete – by 31 December 2013 – the PIURMP and evaluation studies for Rustenburg, Mangaung, Polokwane, NMB and Mbombela.

<sup>&</sup>lt;sup>6</sup> City of Cape Town, 2013-2018 Comprehensive Integrated Transport Plan, pg 53.

"showcase" modern public transport systems as sustainable transport. In addition, the Project was designed to accelerate development of modern public transport systems through strengthening the DoT and building its capacity to sustain the development of modern public transport well past the conclusion of this Project.

### **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 mediumsized UNDP-implemented, GEF-financed projects are required to undergo a Terminal Evaluation (TE) upon completion of implementation of a project to <u>provide a</u> <u>comprehensive and systematic account of the performance of the completed project by</u> <u>evaluating its design, process of implementation and achievements vis-à-vis GEF project</u> <u>objectives and any agreed changes during project implementation.</u> 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;
- $\Rightarrow$  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 South Africa between the 25<sup>th</sup> of August and 5<sup>th</sup> of September 2014. The Terms of Reference (ToR) for the TE are contained in Appendix A. Key issues addressed in this TE include:

 Assessing the impact of the Project in the context of GHG reductions that have been estimated by the PMU and the DoT; and • Sustainability of the Project given the nature of the outputs at the time of this Terminal Evaluation.

Outputs from this TE will provide outlook and guidance in charting future directions on sustaining current efforts by the DoT to reduce its urban transport-related GHG emissions, and to continue its transformation of public transport in South African cities.

#### **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), Project developers, potential investors and relevant UNDP staff;
- Interviews 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 (with the list of questions prepared for various Government and private stakeholders). A detailed itinerary of the Mission is shown in Appendix C. The Evaluation Mission for the UNDP-implemented, GEF-financed project comprised one international expert.

#### **1.2.3** Structure of the Evaluation

This evaluation report is presented as follows:

- An overview of project achievements from the commencement of operations in July 2008;
- 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" (<u>http://erc.undp.org/resources/docs/UNDP-GEF-TE-Guide.pdf</u>) 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**

Original implementation arrangements involved UNDP South Africa as the Implementing Agency and the South African Department of Transport as the Executing Agency (now referred to as an Executing Entity) under the national execution (NEX) modality (now referred to as the national implementation (NIM) modality). The Project also worked with 7 cities hosting some of the FIFA games, which served as Implementing Entities of the Project. An organogram of SPTS implementation arrangements is provide in Figure 1.





## 2. SPTS DESCRIPTION AND DEVELOPMENT CONTEXT

## 2.1 SPTS Start and Duration

The SPTS project document (ProDoc) was signed on 2<sup>nd</sup> January 2008, with formal Project operations commencing on 1<sup>st</sup> April 2008 with the recruitment process for a Project Coordinator. The ProDoc indicated that SPTS was a 4-year project with a termination date of March 31, 2012. SPTS thereafter received three no-cost extensions, the first one to September 30, 2012, the second to June 30, 2013, and the third to the actual termination date of 31<sup>st</sup> December 2013.

## 2.2 Problems that SPTS Sought to Address

The SPTS Project was designed specifically to modernise public transport systems in South Africa by leveraging the need for modern public transport systems for a global event, the 2010 FIFA World Cup (2010 WC). Prior to SPTS, 65% of South Africans used public transport<sup>7</sup>, served mainly by the informal public transport sector<sup>8</sup>. With an increase in the use of private cars resulting in more frequent traffic congestion in all cities of South Africa<sup>9</sup>, the GoSA has made the modernisation of public transport a national priority; the actions of the SPTS Project were to assist host cities in the utilisation of funds from the National Treasury and DoT-administered "Public Transport Systems and Infrastructure Grants" (PTSIG) to plan, design and implement modern public transport systems to meet the demand for spectator transport to the various World Cup venues. In addition, the SPTS Project also sought to strengthen the capacities of the DoT as well as provincial and municipal governments in their capacities to sustainably plan and manage the development and operation of modern public transport systems in South African cities.

## 2.3 Objectives of SPTS

Based on the approved Project planning matrix (PPM) of January 2008, the objective of the SPTS Project was "to promote safe, reliable, efficient, coordinated and integrated urban passenger system in South Africa, managed in an accountable way to ensure that people experience improving levels of mobility and accessibility". The SPTS PPM is contained in Annex A.

To successfully implement these sustainable urban transport (SUT) systems in South Africa, a number of barriers were to be lowered by the Project, including insufficient knowledge of international best practices for planning, developing and implementing SUT projects; the lack of specific capacity for the implementation of PTSIG-approved SUT projects; and fragmented public transport planning by most provincial and municipal governments in South Africa. Another significant barrier was the opposition of existing public transport service providers from the informal sector to the proposed restructured public transport operations.

<sup>&</sup>lt;sup>7</sup> *DoT Strategic Plan 2011-14*: <u>http://www.transport.gov.za/Portals/0/Annual%20Reports/DoT%20Strat%20plan.pdf</u>, see pg 16.

<sup>&</sup>lt;sup>8</sup> The share of formal public transport has been negligible due to its lack of development in most cities and low ridership in favour of the less costly informal transport sector.
<sup>9</sup> According to the 2013-2018 Comprehensive Integrated Transport Plan for Cape Town, car ownership in Cape Town

<sup>&</sup>lt;sup>9</sup> According to the 2013-2018 Comprehensive Integrated Transport Plan for Cape Town, car ownership in Cape Town has risen from 278 to 302 cars per 1,000 population from 2009 to 2013, equivalent to a 2% rise annually with a 0% increase in road space.

To sustain and accelerate the effective development of SUT projects, the institutional barriers and gaps in capacity and awareness needed to be addressed. This included the general under-supply of transportation engineers and planners in the country. The capacity building needs of these professions were to increase their knowledge and technical capacity through focused training on sustainable transportation engineering and planning and an increase in work-related experience of junior transport professionals.

### 2.4 Main Stakeholders

Table 1 is a list of stakeholders of the SPTS Project as listed in the Project Document. Due to the spatial distribution of stakeholders throughout South Africa, only a fraction of these stakeholders were interviewed during the TE mission, as noted in Table 1.

The South African National Department of Transport (DoT) was the key stakeholder, serving as the Executing Entity for SPTS, while having the oversight mandate on national transport strategies and policies, regulation of the transport sector, and oversight of the PTSIG funds to develop public transport.

### 2.5 Expected Results

The SPTS Project had the following objectives:

- The *goal* was to reduce greenhouse gases (GHGs) from urban transportation in South African cities through the promotion of a long-term modal shift to more efficient and less polluting forms of transport.
- The *objective* was the promotion of a safe, reliable, efficient, coordinated and integrated urban passenger system in South Africa, managed in an accountable way to ensure that people experience improving levels of mobility and accessibility.

#### <u>Outcome 1</u> <u>Implementation of transport system improvements in seven 2010</u> <u>venue cities</u>:

- ⇒ Output 1.1: Restructured public transport systems (high-impact modal-shift projects) have been supported and are implemented;
- ⇒ Output 1.2: Road management and transport system efficiency improvements have been supported and are implemented;
- ⇒ Output 1.3: Non-motorized transport projects have been supported and are implemented in three venue cities;
- ⇒ Output 1.4: Travel Demand Management projects have been supported in Cape Town and are implemented.

#### <u>Outcome 2</u> <u>Strengthened capacity and increased knowledge to plan, manage and</u> <u>implement sustainable transportation options:</u>

- $\Rightarrow$  Output 2.1: Technical capacity in sustainable transport has been strengthened;
- ⇒ Output 2.2: Increased information and knowledge about sustainable transportation options amongst local and national decision-makers and transport and urban planners

| Category     | Institution/organization                           | Branch/Department                                   |
|--------------|--|---|
| National     | Department of Transport                            | Chief Directorate: Integrated Transport Planning    |
| Government   |  | Chief Directorate: 2010 World Cup                   |
|              |  | Chief Directorate: Public Transport Strategy and    |
|              |  | Monitoring (interviewed)                            |
|              |  | Chief Directorate of Staff Training (interviewed)   |
|              | Department of Environmental Affairs and            | Chief Directorate: Air Quality Management &         |
|              | Tourism  | Climate Change                                      |
|              | Department of Mineral and Energy Affairs           | Directorate: Energy Efficiency and Environment      |
|              | Department of Local and Provincial<br>Government   | Chief Directorate: Systems and Capacity Building    |
|              | Department of Sport and Recreation<br>South Africa |   |
|              | National Treasury                                  |   |
|              | Office of the Presidency                           | Project Management Unit for 2010                    |
| Provincial   | Eastern Cape                                       | Department of Roads and Transport                   |
| Government   | Free State   | Department of Public Works, Roads and Transport     |
|              | Gauteng  | Department of Public Transport, Roads and Works     |
|              | Kwa Zulu Natal                                     | Department of Transport                             |
|              | Limpopo  | Department of Roads and Transport                   |
|              | Mpumalanga   | Department of Roads and Transport                   |
|              | Northwest  | Department of Transport, Roads and Community Safety |
|              | Western Cape                                       | Department of Transport and Public Works            |
| Local        | City of Cape Town Metropolitan                     | Transport Planning (interviewed)                    |
| Government   | Municipality                                       |   |
|              | City of Johannesburg Metropolitan                  | Transportation Planning and Management              |
|              | Municipality                                       | (interviewed)                                       |
|              | City of Tshwane Metropolitan Municipality          | Transport Development                               |
|              | eThekwini Metropolitan Municipality                | eThekwini Transport Authority                       |
|              | Mangaung Local Municipality                        |   |
|              | Mbombela Local Municipality                        |   |
|              | Nelson Mandela Metropolitan Municipality           | Infrastructure and Engineering Business Unit        |
|              | Polokwane Local Municipality                       |   |
|              | Rustenburg Local Municipality                      | Rustenburg Rapid Transport (interviewed)            |
| NGOs and     | Local Organising Committee for the 2010 W          | Vorld Cup   |
| other        | Green Goal 2010 Committee                          |   |
| associated   | South African Football Association                 |   |
| Institutions | South African Cities Network                       |   |
| Academic     | University of Pretoria                             |   |
|              |  | DI TOWII  |
| associations | Minibus taxi associations                          |   |
| Funding      | UNDP/GEF AEDB DBSA                                 |   |
| agencies     |  |   |

#### Table 1: List of SPTS Stakeholders

#### Outcome 3 Monitoring, learning, adaptive feedback and evaluation:

This Terminal Evaluation reviews the activities under this outcome under Monitoring and Evaluation (M&E).

The  $CO_2$  emission reduction target directly attributable to the Project was to be 423,000 tonnes of  $CO_2$  equivalent over ten years. The indirect  $CO_2$  emission reduction due to replication was estimated to be 2 million tonnes  $CO_2$ -equivalent over a ten-year period. Section 3 provides details on the actual SPTS Project outcomes and outputs.

## 3. FINDINGS

## 3.1 **Project Design and Formulation**

This section evaluates design of the Project, which was the result of consultations during the 2006-2008 period with various national and municipal Government officials and inputs from international sustainable transport experts from Colombia and Germany. In general, the Project was well designed, especially in consideration of the outcomes of the Project.

#### 3.1.1 Analysis of Project Planning Matrix

Overall, the Project Planning Matrix (PPM) meets the conditions of SMART indicators<sup>10</sup>. The PPM was written in 2007-2008 with indicators to monitor the required activities of the Project. The indicators in the Project Document, however, did not have quantitative values, notably for Component 1 as outcomes and outputs were described as a future condition rather than a quantity (as is more common with PPMs written post-2010). This was likely due to a lack of quantitative baseline information, which would have made target-setting difficult for indicators such as subsidy levels, number of households positively affected by sustainable transport options and passenger loads. The PPM required fine-tuning during the early stages of SPTS. This required SPTS to have budgeted activities for the collection of baseline data, and the subsequent changes to the PPM.

#### 3.1.2 Risks and Assumptions

Given the high-risk nature of this Project, the PPM appropriately describes the numerous risks that would be encountered by a Project of this nature and scale. One interesting assumption mentioned was that the "BRT system can function on a no-subsidy basis". Given the global experience during 2006-2008 with bus rapid transit (BRT) systems, whereby most South American BRT systems did not require subsidies for BRT<sup>11</sup>, the vision of South Africa was to emulate the systems of Bogota, Columbia. Given the lack of history of developed public transport in South Africa, operating a BRT system without subsidies would have been highly unlikely.

#### 3.1.3 Lessons from Other Relevant Projects Incorporated into SPTS Design

The Project design does acknowledge the successful implementation of sustainable transportation initiatives, such as BRT systems in Bogotá (Colombia), Curitiba (Brazil) and Seoul (South Korea). While not specifically mentioned in the Project Document, the GoSA had sent several of its personnel as well as mini-bus representatives to Bogota to observe the TransMilenio BRT system. As such, many of the activities planned for public transport for the 2010 FIFA World Cup were modelled on the TransMilenio system.

<sup>&</sup>lt;sup>10</sup> Specific, measurable, achievable, relevant and time-bound.

<sup>&</sup>lt;sup>11</sup> Hensher and Golob, 2008, Bus Rapid Transit Systems: a comparative assessment, Transportation, Volume 35, No.4.

#### 3.1.4 Planned Stakeholder Participation

The Project was planned to more effectively engage the Department of Transport (DoT) with the provincial and municipal governments of host venue cities to implement SUT options. In addition, the Project was also aligned with academic and training institutes, such as the University of Pretoria and University of Cape Town, for training of South African transport planners and engineers, and with various organisations associated with the 2010 FIFA World Cup.

#### 3.1.5 Replication Approach

The replication approach was based on the Project capitalising on a high-profile sporting event, the 2010 FIFA World Cup, to catalyse interest in improving public transport in South Africa. The successful implementation and demonstration of sustainable urban transport to Cup games would sensitise the public as well as politicians to modernise public transport in the large cities of South Africa, and facilitate widespread support for modernisation of urban transport systems.

#### 3.1.6 UNDP Comparative Advantage

The strength of UNDP's involvement with SPTS was its long-term involvement in providing technical assistance for sustainable transport development in developing countries, with a focus on poverty alleviation and energy security. UNDP also 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 organisations.

UNDP also has similar projects working with high-profile sporting events, such as:

- The 2008 Beijing Olympic Games, where GEF funds were used to demonstrate fuel cell buses for public transport;
- The 2010 Commonwealth Games in India to develop and implement a low-carbon campaign;
- The Russian Sustainable Transport Project that contained a component to assist the City of Kazan to reduce its GHG emissions from road transport for the 2013 Russia Summer Universade Games; and
- The Greening of the 2014 Sochi Olympic Games Project that was designed to assist the organisers of the Games to host a carbon-neutral event, to reduce their carbon footprint through early implementation of carbon planning, and by offsetting remaining GHG emissions related to hosting the Olympic Games.

In the context of sustainable transport development in urban areas, UNDP's approaches to project implementation play to its strengths, which include addressing multi-dimensional development perspectives and the ability to address cross-sectoral issues and inclusiveness in constituency building.

#### 3.1.7 Linkages between SPTS and Other Interventions within the Sector

The SPTS Project design was strongly linked with the Public Transport Systems and Infrastructure Grant (PTSIG) under the National Treasury and managed by the

Department of Transport (DoT)<sup>12</sup>. The PTIF budget was in the order of USD 500 million to develop public transport and non-motorised transport (NMT) infrastructure and systems with priority to venues supporting the 2010 soccer events.

Though not specifically mentioned in the Project Document, the Project became strongly aligned with the Public Transport Operational Fund (PTOF), also under the National Treasury, after the 2010 FIFA Event. The PTOF was used to assist municipalities in subsidising the operations of modernised public transport systems that had received PTIF assistance<sup>13</sup>.

#### 3.1.8 Management Arrangements

The management arrangements followed standard UNDP-GEF management practices under the NIM modality, with DoT as the Executing Entity and UNDP as the Implementing Agency. With the DoT managing disbursement of the PTSIG funds, the DoT also utilised SPTS resources to augment implementation of sustainable public transport projects with some of the 13 cities identified in 2007 by the Public Transport Strategy and Action Plan and with funds from the PTSIG. The PMU of SPTS would work closely with DoT to identify and enhance DoT efforts to assist local governments in the implementation of their SUT plans. In addition, the PMU was also tasked to direct SPTS resources towards enhancement of DoT training programmes to academic institutes as well as training outreach to provincial and municipal governments.

### 3.2 **Project Implementation**

The preparations of the SPTS Project had commenced with the approval of the PDF-B Grant in January 2005. Actual project preparations did not commence for another 17 months until June 2006. With submission of the documents completed in March 2007, GEF Council did not approve the SPTS Project until November 2007, and CEO Endorsement was not received until January 2008.

With 39 months taken to prepare this Project, the actual Project activities only commenced on April 1, 2008 with the recruitment of a full-time Project Coordinator (PC); this was only 2 years prior to the commencement of the 2010 FIFA World Cup Tournament, a time when preparations by the DoT, venue cities and other stakeholders were at a frantic pace. A first task for the PC was to assess the actual progress of all ongoing efforts by DoT as well as the host cities on their preparations, and to propose where the Project could be of assistance. Much of the planned work in the Project Document was conducted without GEF assistance in late 2007 and early 2008 under intense conditions where counterpart staff were under constant pressure to ensure critical schedule compliance for the 2010 WC preparations. Despite initial disinterest in the Project, the participating municipalities utilised the Project resources commencing in July 2008 for purposes aligned with the activities proposed in the ProDoc, albeit with varying degrees of success as described in later sections of this report.

The SPTS Project also experienced problems during the 2008-2010 period, with a poor working relationship between DoT and UNDP. These tensions originated in the 2008

<sup>&</sup>lt;sup>12</sup> This was formerly known as the Public Transport Infrastructure Fund (PTIF) in 2006.

<sup>&</sup>lt;sup>13</sup> PTOF would only support 75% of the operational costs for the first 2 years of operation of a PTSIG-funded system

withdrawal from the Project budget of the 5% service fee of UNDP prior to the delivery of its services to the Project. While this issue was resolved through the returning of the 5% fee in 2011 and staff changes at the Country Office, an opportunity cost was incurred to the Project for the efforts required to resolve this issue at a time of intense activity in preparation for the 2010 WC.

Another implementation issue arose with the capacity building activities of Component 2 during the 2008-2010 period, which were scheduled as quarterly workshops. All venue cities were reluctant to attend these workshops due to the pressure from their ongoing commitments with the 2010 WC preparations. With the exception of the postgraduate technical training activities and activities related to the training of public transport operators during the World Cup, capacity building and training activities of Component 2 were rescheduled and implemented after August 2010, immediately after completion of the 2010 FIFA World Cup Games. This included on-the-job training of young professionals at DoT and local government (Activity 2.1.2), development of the web-based resource for sustainable transport (Activity 2.2.2), the short-term communication strategy (Activity 2.2.3) and a series of workshops and participation at various conferences (Activity 2.2.4).

#### 3.2.1 Adaptive Management

The Project was adaptively managed to meet the needs of the DoT and the participating municipalities. This included the need for the Project Coordinator at the commencement of SPTS to assess ongoing activities with the World Cup preparations of all venue cities and to dovetail SPTS activities according to the needs of these cities including:

- Under Component 1 at the commencement of the Project in July 2008, the PMU needed to adapt Project activities with ongoing developments at the municipal level, targeting ongoing activities where consultant or service provider selections were already finalised. In instances where these activities aligned with those planned in the Project Document, the PC implemented a streamlined mechanism for approval to disburse Project funds for these activities. This included signed Memoranda of Agreement (MoAs) between DoT, UNDP and the authority at the municipal level, and the issuance of a "no objection" letter to confirm services delivered in compliance with SPTS plans;
- Re-design of information workshops that were intended to be conducted during the World Cup preparations to share developmental issues and experiences. Since the cities had refused to attend these quarterly workshops due to intense pressure to complete 2010 WC preparations during the 2008-10 period, the Project re-assigned these resources for workshops and participation at conferences after the World Cup that would contribute to sustained promotion of transport solutions after completion of the WC Games;
- Delaying of the on-the-job training in Component 2 until after the 2010 WC events. This was necessitated by the unavailability of the training candidates due to their involvement with the 2010 WC preparations.

#### 3.2.2 Partnership Arrangements

There was engagement from a wide spectrum of stakeholders during the 2006 PDF-B phase of the Project. The start date of SPTS, however, made it difficult for the Project to foster partnership arrangements at the local level, where there was pressure to complete the works in a timely manner. For cities such as Nelson Mandela Bay, Mbombela and

Manguang, where sustainable transport measures have not been properly used after the 2010 WC, more efforts to effectively engage these cities with the Project may have proven to be beneficial. With the exception of Johannesburg and Cape Town, the engagement of the smaller South African cities was very important considering the lack of capacity for transport planning in these cities.

The Project Steering Committee (PSC) was the mechanism under which Project partnerships were to be strengthened. The PSC consisted of a wide range of national government agencies (DoT, DEAT, DoMEA, DoST and the Treasury), the South African Local Government Association (SALGA), the Local Organising Committee for the 2010 FIFA World Cup, the UNDP Regional Centre and the PMU. While these stakeholders all hold some importance to the Project, the number of PSC members appears to be too high. This is reflected in the low number of attendees to the PSC meetings. Moreover, the low attendance at PSC meetings was a missed opportunity to share developmental experiences between all host cities, and possible solutions to some of the problems (such as the Integrated Public Transit System (IPTS) at NMB). While the Provincial Governments participated in the Project during the PDF-B Phase, their involvement during Project implementation was minimal, likely due to the time required to attend the meetings and the pressures of meeting their preparation obligations for the 2010 WC.

The PSC was also supposed to establish the Technical Advisory Committee (TAC) as another mechanism to engage stakeholders. However, these quarterly workshops were not held as originally planned due to pressures on all local stakeholders to meet their 2010 WC obligations, further limiting the partnerships formed by the Project with local-level governments. It is likely that, if the Project had commenced 3 years ahead of the 2010 WC events, establishment of the TAC would have occurred.

With regard to capacity building partnerships, the PC has established a good collaborative relationship with the University of Cape Town and University of Pretoria in the selection and supervision of postgraduate students to undertake research in sustainable transport that is relevant to sustained development of sustainable public transport in South Africa.

#### 3.2.3 Feedback from M&E Activities Used for Adaptive Management

Feedback for adaptive management of the Project was sourced from M&E activities recorded in:

- QPRs that were regularly issued during the Project;
- PIRs and APRs from 2011 to 2013; and
- PSC meetings. The Evaluator has minutes from the PSC meetings held in 2012 and 2013.

The source of information for these reports and meetings was the periodic oversight of the PC along with the UNDP Programme Manager, who both made periodic visits to the seven venue cities to monitor progress and guide activities towards the intended outcomes. With the aforementioned personnel changes within UNDP during the critical 2009-11 period, visits by UNDP became less frequent, leaving the PC as the lone Project resource to monitor SPTS progress. The inability of the Project to secure additional M&E personnel may have been costly since there were ongoing problems in Nelson Mandela Bay, Mbombela and Manguang which would have benefitted from additional attention to emerging and ongoing implementation issues. The ProDoc had resources for a Project

Officer to serve an M&E function; no such person, however, was hired for this position due to the lack of approval from either the DoT or UNDP. There was also an initiative at the commencement of the Project for secondment of 5 transport planning engineers through the United Nations Volunteers (UNV) programme to assist in the Project activities; this proposal, however, was turned down by the municipalities, whose preference was to use their own local personnel. This is unfortunate as it developed a disconnect between the municipalities and the Project, with its capacity to provide quality control according to international norms.

#### 3.2.4 Project Finance

SPTS had a GEF budget of USD 10,973,000 that was utilised over a 69-month duration, managed by the PMU under NEX/NIM modality with oversight approval from the PSC for various technical assistance activities, workshops and technical studies for the pilot sustainable urban transport projects.

Table 1 provides an overview of expenditures of the GEF Project budget of USD 10,973,000 from July 2008 to December 2013. <u>The cost-effectiveness of the Project has been Satisfactory</u> considering the Project achievements vis-a-vis the PPM targets, and some of the challenges in completing the physical works in the various municipalities and achieving operational public transport systems in Johannesburg and NMB.

Project disbursements were low during 2008, with only the Rea Vaya BRT benefitting from Project resources. Disbursements for most of the Project activities, however, were in line with the planned disbursements. With the PTIS funding many of the activities during 2008 and 2009, venue cities had sufficient funds for development of their public transport systems. With the completion of the World Cup events in 2010, and the reduced availability of PTIF funds, a number of the venue cities submitted unpaid retroactive invoices to the DoT and onwards to the PMU for consulting services that were actually covered under the SPTS budget. This provides the rationale for disbursement of funds for the transport systems well after the 2010 FIFA World Cup was over.

The total co-financing commitment of USD 1,823 million for the Project was exceeded by a factor of 13; this is mainly due to the PTSIG grants that were administered by the DoT for use by the municipalities. The higher co-financing levels for the grant portion of the Project were mainly a result of the escalation in infrastructure construction costs that were inflated during a period of intense construction activity for the 2010 FIFA World Cup, and post-2010 WC investments. Municipal co-financing expenditures and in-kind contributions that are likely substantial were not available at the time of the writing of this report. A summary of Project co-financing is provided on Table 2. Table 3 provides a breakdown of PTISG co-financing by municipality.

| Outcome and Activity |  | Budget     | GEF Funds Disbursed |           |           |           |           |            |            |  |
|----------------------|--|------------|---------------------|-----------|-----------|-----------|-----------|------------|------------|--|
|                      | Outcome and Activity                             | USD        | 2008                | 2009      | 2010      | 2011      | 2012      | 2013       | Total      |  |
| Outcome 1            | Transport System Improvements                    | 8,534,893  | 365,486             | 2,447,048 | 3,162,922 | 729,319   | 740,179   | 989,299    | 8,434,253  |  |
| Activity 1.1.1       | Rea Vaya BRT in Johannesburg                     | 3,501,000  | 365,486             | 1,749,515 | 1,340,370 | 25,510    | 89,593    |            | 3,570,474  |  |
| Activity 1.1.2       | BRT in Nelson Mandela Bay                        | 2,446,500  |                     | 574,343   |           | 635,213   | 578,808   | 591,147    | 2,379,511  |  |
| Activity 1.2.1       | HOV Lane in Mbombela                             | 99,646     |                     | 34,300    | 24,346    |           |           | 37,391     | 96,037     |  |
| Activity 1.3.1       | NMT Network in Polokwane                         | 921,000    |                     | 88,890    | 445,000   |           |           | 360,761    | 894,651    |  |
| Activity 1.3.2       | NMT in Manguang Local Municipality (MLM)         | 872,400    |                     |           | 871,726   |           |           |            | 871,726    |  |
| Activity 1.3.3       | NMT in Rustenburg                                | 400,400    |                     |           | 368,533   |           |           |            | 368,533    |  |
| Activity 1.4.1       | TDM in Cape Town                                 | 293,947    |                     |           | 112,947   | 68,596    | 71,778    |            | 253,321    |  |
| Outcome 2            | Increased capacity and strengthened institutions | 1,597,021  | 0                   | 22,700    | 380,358   | 266,245   | 218,983   | 687,019    | 1,575,305  |  |
| Activity 2.1.1       | Technical training at post-graduate level        | 164,109    |                     | 22,700    | 89,339    | 52,069    |           |            | 164,108    |  |
| Activity 2.1.2       | Young professionals at national level            | 168,705    |                     |           | 35,838    | 49,468    | 67,040    | 16,359     | 168,705    |  |
| Activity 2.1.3       | Young professionals at local level               | 442,000    |                     |           |           |           | 86,799    | 337,168    | 423,967    |  |
| Activity 2.2.1       | Training of public transport operators           | 255,200    |                     |           | 255,181   |           |           |            | 255,181    |  |
| Activity 2.2.2       | Web-based knowledge resource                     | 240,000    |                     |           |           | 457       | 36,106    | 186,039    | 222,602    |  |
| Activity 2.2.3       | Short term communication strategy                | 137,250    |                     |           |           | 137,250   |           |            | 137,250    |  |
| Activity 2.2.4       | Workshops  | 167,873    |                     |           |           | 5,117     | 29,038    | 147,453    | 181,608    |  |
| Activity 2.2.5       | COP 17 Guide to Low-Carbon Transport             | 21,884     |                     |           |           | 21,884    |           |            | 21,884     |  |
|                      | Monitoring, Learning and Evaluation              | 341,438    | 0                   | 8,469     | 64,756    | 21,188    | 6,501     | 90,021     | 190,935    |  |
|                      | Annual audits                                    | 150,000    |                     | 8,469     | 15,640    | 18,866    | 6,501     | 6,381      | 55,857     |  |
|                      | Mid-Term Evaluation                              | 51,438     |                     |           | 49,116    | 2,322     |           |            | 51,438     |  |
|                      | Terminal Evaluation                              | 50,000     |                     |           |           |           |           | 356        | 356        |  |
|                      | NMT Evaluation Studies                           | 90,000     |                     |           |           |           |           | 83,284     | 83,284     |  |
|                      | Project Management                               | 499,648    | 246,055             | 84,035    | 109,061   | -79,045   | 71,055    | 45,154     | 476,315    |  |
|                      | UNDP Service Fees                                | 20,000     | 200,000             | 1,457     |           | -200,000  | 643       |            | 2,100      |  |
|                      | Project Management Unit                          | 479,648    | 46,055              | 82,578    | 109,061   | 120,955   | 70,412    | 45,154     | 474,215    |  |
| Total                | •  | 10,973,000 | 611,541             | 2,562,252 | 3,717,097 | 937,707   | 1,036,718 | 1,811,493  | 10,676,808 |  |
| Cumulative To        | tal  |            | 611,541             | 3,173,793 | 6,890,890 | 7,828,597 | 8,865,315 | 10,676,808 |            |  |
| % delivery           |  |            | 5.6%                | 28.9%     | 62.8%     | 71.3%     | 80.8%     | 97.3%      |            |  |

<sup>&</sup>lt;sup>26</sup> The remaining USD 296,192 will cover additional costs for this Terminal Evaluation and Audit Fees for 2013 and 2014 financial years.

| Co-financing<br>(type/source) | UNDF<br>finar<br>(million | P own<br>Icing<br>n USD) | Gove<br>(millio       | rnment<br>on USD)       | Partner A<br>(million | gency<br>USD) | Private<br>(millio | Sector<br>n USD) | To<br>(millio) | tal<br>n USD) |
|-------------------------------|---------------------------|--------------------------|-----------------------|-------------------------|-----------------------|---------------|--------------------|------------------|----------------|---------------|
|                               | Planned                   | Actual                   | Planned               | Actual                  | Planned               | Actual        | Planned            | Actual           | Planned        | Actual        |
| Grants                        | 0                         |                          | 137.386 <sup>27</sup> | 1,823.357 <sup>28</sup> | -                     | -             |                    |                  | 137.386        | 1,823.357     |
| Loans/Concessions             |                           |                          |                       |                         | -                     | -             |                    |                  |                |               |
| In-kind support               |                           |                          | 2.372 <sup>29</sup>   | 30                      |                       |               |                    |                  | 2.372          |               |
| Other                         |                           |                          |                       |                         |                       |               |                    |                  |                |               |
| Totals                        |                           |                          | 139.758               | 1,823.357               |                       |               |                    |                  | 139.758        | 1,823.357     |

Table 2: Co-Financing for SPTS project (as of December 31, 2013)

#### Table 3: Co-Financing from PTIS Grants broken down into the venue cities (as of December 31, 2013)

| CITY                            | 2008 / 2009       | 2009 / 2010       | 2010 / 2011       | 2011 / 2012       | 2012 / 2013       | Total              |
|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
|                                 |                   |                   |                   |                   |                   |                    |
| City of Johannesburg            | ZAR 661,171,000   | ZAR 652,803,000   | ZAR 1,300,471,000 | ZAR 1,700,000,000 | ZAR 1,353,702,000 | ZAR 5,668,147,000  |
| Rustenburg                      | ZAR 68,657,000    | ZAR 67,782,000    | ZAR 89,575,000    | ZAR 178,000,000   | ZAR 303,484,000   | ZAR 707,498,000    |
| Port Elizabeth (Nelson Mandela) | ZAR 305,484,000   | ZAR 147,079,000   | ZAR 408,333,000   | ZAR 340,000,000   | ZAR 298,702,000   | ZAR 1,499,598,000  |
| Polokwane                       | ZAR 143,207,000   | ZAR 96,146,000    | ZAR 60,250,000    | ZAR 55,347,000    | ZAR 48,703,000    | ZAR 403,653,000    |
| Cape Town                       | ZAR 424,842,000   | ZAR 332,500,000   | ZAR 1,018,355,000 | ZAR 1,800,000,000 | ZAR 1,448,702,000 | ZAR 5,024,399,000  |
| Bloemfontein (Manguang)         | ZAR 242,617,000   | ZAR 82,168,000    | ZAR 166,000,000   | ZAR 15,000,000    | ZAR 20,000,000    | ZAR 525,785,000    |
| Nelspruit (Mbombela)            | ZAR 17,054,000    | ZAR 90,833,000    | ZAR 120,000,000   | ZAR 45,000,000    | ZAR 98,703,000    | ZAR 371,590,000    |
| Total ZAR                       | ZAR 1,863,032,000 | ZAR 1,469,311,000 | ZAR 3,162,984,000 | ZAR 4,133,347,000 | ZAR 3,571,996,000 | ZAR 14,200,670,000 |
| Total USD                       | USD 215,816,044   | USD 185,051,763   | USD 438,866,499   | USD 559,650,716   | USD 423,971,593   | USD 1,823,357,000  |

 <sup>&</sup>lt;sup>27</sup> USD 132.002 million from the PTIS, and the remaining USD 5.384 from the 7 participating venue cities.
 <sup>28</sup> These are only PTIS grants that do not include any contributions from the municipalities. See Table 3 for a breakdown of the PTIS grants.
 <sup>29</sup> USD 2.18 million from DoT, USD 48,000 from each of the following municipalities: Mbombela, Manguang, Rustenburg and Polokwane.

<sup>&</sup>lt;sup>30</sup> There has been in-kind support from DoT as well as all participating municipalities. The value of in-kind assistance, however, has not been provided to the Evaluator who estimates that the in-kind assistance has been substantial throughout the Project, and exceeds the USD 2.372 million originally planned.

#### 3.2.5 M&E Design at Entry and Implementation

As mentioned in Section 3.1.1, the Project design did not have sufficient quantitative baseline information to measure the impact of sustainable transport measures on this Project, and other specific information pertaining to the situation at the commencement of the Project. The Project Document did, however, recognise this shortcoming and allocated resources to both baseline and post-project studies of all sustainable transport developments in Outcome 1. The issue, however, was the timing of the commencement of the Project, two years before the 2010 WC events when preparations were frantic and some activities proposed by the Project Document were already underway or completed. With the exception of the baseline study done for the City of Johannesburg in 2009, the PMU consisting of only one person, the PC, was unable to recruit consultants for baseline studies during this crucial period during the WC preparations. As a result, much of the baseline information was gathered in the post-project evaluations using old data from the various venue cities or anecdotal information in the absence of systematic data collection.

SPTS progress reports illustrate the complexities of the Project, and the efforts required to ensure proper implementation. While the PIRs provide descriptive narrative on Project progress, the PC was the only Project resource undertaking M&E functions. His completion report for the Project, dated December 2013, also provides thorough details of how the Project was implemented. It includes the steps taken to rationalise the activities, terms of reference for each activity, specific activities performed, amounts disbursed and outcomes.

The PMU as well as the DoT made efforts to address activity shortcomings. Some of the crucial shortcomings, however, were not adequately addressed, such as the need for additional PMU monitoring staff for the HOV lane for Mbombela and the BRT line in Nelson Mandela Bay (NMB). This could be considered an M&E shortcoming given that there were opportunities to provide additional M&E personnel for the Project.

Ratings of the Project's Monitoring and Evaluation system are as follows:

- <u>M&E design at entry Satisfactory;</u>
- <u>M&E plan implementation Moderately Satisfactory</u>.

#### 3.2.6 Performance of Implementing and Executing Agencies

<u>The performance of DoT as the Executing Agency (now known as Executing Entity) on</u> <u>this Project is rated Satisfactory.</u> The role of DoT as the EA on this Project was to provide the guidance and provide Government support and profile for implementing SPTS. The National Project Director (NPD) for SPTS performed this role very well in providing the Project with the necessary guidance and profile for the entire period of the Project as well as the PDF-B Phase. This provided a positive impact for the Project in its ability to achieve its objectives.

<u>The quality of UNDP implementation is rated as Moderately Satisfactory.</u> The primary reasons for this rating are:

- Delivery of a robust Project design (as outlined in Section 3.1);
- The delays caused by UNDP during the early stages of the Project in reimbursing invoices submitted by the municipalities, and the extra efforts required in 2010 and

2011 to repay the 5% service fee taken at the onset of the Project without proper accounting; and

• An improved relationship with DoT after the 2010 FIFA World Cup, including the organisation of a number of high-profile events.

*The overall quality of implementation and execution of SPTS is rated as Moderately Satisfactory.* The primary reasons for this rating are related to:

- The adaptive management undertaken by the PC to dovetail SPTS Project activities under difficult circumstances in 2008 to 2010 (the two years prior to the 2010 WC events), when all partner municipalities were under pressure to meet their preparation obligations;
- The failure of the SPTS Project to secure additional personnel for monitoring and evaluation during the 2008 to 2010 period that may have resolved some of the sustainable transport issues with NMB and Mbombela;
- Successful completion of academic and on-the-job training courses for young transport professionals;
- Failure to launch the web portal for sustainable transport; and
- Effective use of Project resources to raise the profile of sustainable transport in South Africa.

### 3.3 **Project Results**

Assessment of SPTS results are provided in this section against the 2008 PPM. For Outcome 1, the Project activities in the 7 venue cities were evaluated against individual criteria of:

- *Relevance* the extent to which the outcome was suited to local and national development priorities and organisational 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.

In addition, each venue city was evaluated as an output against the Project Goal (with indicators of GHG reductions as well as air quality improvements and noise reduction along the corridors), and the Project Objective (improvements in modal shift, improvement in public perception of public transport, and number of person-trips per annum along selected corridors). This was possible since studies were done for the 7 venue cities to set the baselines and establish targets.

For Outcome 2, each output was evaluated against the aforementioned criteria and indicators set in the PPM.

The Project outputs (from Outcome 1) and Outcomes 2 and 3 were rated based on the following scale:

1. 6: Highly Satisfactory (HS): The project has no shortcomings in the achievement of its objectives;

- 2. 5: Satisfactory (S): The project has minor shortcomings in the achievement of its objectives;
- 3. *4: Moderately Satisfactory (MS)*: The project has moderate shortcomings in the achievement of its objectives;
- 4. 3: Moderately Unsatisfactory (MU): The project has significant shortcomings in the achievement of its objectives;
- 5. 2: Unsatisfactory (U) The project has major shortcomings in the achievement of its objectives;
- 6. 1: Highly Unsatisfactory (HU): The project has severe shortcomings in the achievement of its objectives.

The results of each activity in each outcome are described in the narratives in Sections 3.3.1 and 3.3.2. Ratings of the various results for each output (or activity) and various aspects of the design and management of the Project are summarized in Table 12.

# 3.3.1 Outcome 1: Implementation of transport system improvements in seven 2010 venue cities

<u>Output 1.1: Restructured public transport system (high-impact modal shift projects): BRT</u> systems (Rea Vaya Johannesburg and Khulani Corridor N. Mandela Bay):

For this output, two activities involving two public transport systems were involved: the Rea Vaya BRT in the City of Johannesburg (CoJ) and the Khulani Corridor in Nelson Mandela Bay (NMB). The results for each of these systems are provided in the following section.

#### Activity 1.1.1: Rea Vaya BRT in Johannesburg:

Outcomes of this activity can be found in Table 3, which provides outcomes reported against indicators from the goal and objective of the Project and the desired outcome of the component.

Project involvement with the Rea Vaya Bus Rapid Transit (BRT) began almost immediately after the commencement of the Project on July 1, 2008. Since the route was of importance for the transport of spectators to the 2010 FIFA World Cup games in the township of Soweto, the PMU, with the agreement of the PSC, determined that Project assistance would be provided to the Rea Vaya BRT, including:

- Formulation and implementation of a marketing and public awareness plan as well as a social safeguarding plan to overcome negative perceptions regarding Rea Vaya public transport and to maximise ridership. With the tender process for the selection of a consultant already completed retroactively in May 2008, the Project provided a "no objection" to the selected consultant of the City of Johannesburg (CoJ), who completed the plans by September 2009;
- Preparation and implementation of business and financial models and partnership structure between the existing taxi operators and the CoJ along with a defined fare structure for feeder and trunk services, framework and performance standards of negotiated contracts between the operators and the CoJ, and the facilitation and establishment of new public transport entities. This was the most critical work undertaken by the Project given the importance of support required from the taxi associations. Failure to reach an agreement would have had significant

consequences for the Project as well as the image of the 2010 FIFA World Cup Games in Johannesburg;

- Additional technical support to minibus and taxi operators. This was undertaken after technical assistance to the taxi association from CoJ was terminated in June 2009. Deviations from the normal consultant selection process were undertaken to recruit a technical expert with a strong and trusted relationship with the taxi association. Project assistance was provided during the August 2009-August 2010 period, after which the consultant continued his services with the funding of CoJ. Involvement of a trusted technical expert was critical given the need for continuous support of the mini-bus taxi associations along the Rea Vaya routes through a long protracted negotiation process;
- The baseline GHG emission studies<sup>31</sup>; and
- The post-project economic evaluation study, which found that Phase 1A of the Rea Vaya BRT provided large benefits for lower to middle income communities while Phase 1B served a wealthier class with stronger likelihood of use of the BRT during off-peak hours.

With regard to the technical support provided to mini-bus and taxi operators in June 2009, these were critical moves by the Project to ensure full buy-in of the taxi associations into a new BRT transit entity:

- First, the Project was involved in securing an advisor for the business and financial models and partnership structure between the taxi associations and the CoJ, an advisor who was independent of CoJ. This required a departure from normal procurement processes to secure the services of Umcebisi Business Advisors, who provided the key liaison with the taxi-BRT Steering Committee. They also, on behalf of the taxi associations, set up financial models, the business structure that included the affected operators and the new BRT Operating Company, provided advice to the taxi association through written communications and meetings, assisted with presentation and refinement of the business model, and organised mandate letters and nominations for a negotiating team. Their activities commenced in July 2008 with a "no objection" letter and concluded in February 2009; and
- Second, the Project assisted with the continuation of required technical support to the taxi industry after the termination of technical support from the CoJ for Phases 1A and 1B of the new Rea Vaya VRT system. This required another departure from normal procurement procedures to secure the services of FOT Consulting to provide the necessary technical assistance based on a trusted and good relationship with one of its technical experts, Mr Darko Skrbinsek. Under this contract, FOT undertook important roles for the taxi associations, including registering the affected taxi operators for Phases 1A and 1B, preparing the taxi associations for the BRT negotiating process, development of the financial operational model and development of the financial corporate model for the new BRT entity.

The Rea Vaya BRT is now a highly successful and high-profile BRT route from the township of Soweto into the CBD of Johannesburg that transported over 7.0 million passengers during the August 2013 to July 2014 period:

<sup>&</sup>lt;sup>31</sup> The post-project GHG emission studies were funded by CoJ.

| Indicator   | Baseline   | End-Of-Project (EOP) Outcome   |
|---|--|--|
| Goal: To reduce greenhouse  | gases (GHGs) from urban transp   | oortation in South African cities through  |
| Reduction in CHC omissions  | No reduction   | A direct reduction of 398 292 toppos CO <sub>2</sub> over 10   |
| Reduction in GHG emissions<br>associated with<br>modal shifts and higher<br>transport system<br>Efficiency  | No reduction   | A direct reduction of 398,292 tonnes CO <sub>2eq</sub> over 10<br>years was reported. This was calculated in<br>accordance with CDM Methodology, AM0031,<br>Version 03.1.0, Baseline Methodology for Bus Rapid<br>Transit Projects, and is consistent with Chapter IV,<br>"Step-by-Step Guide to Estimating Direct Impacts of<br>Rapid Transit and Railway Projects", of the GEF<br>Scientific & Technical Advisory Panel (STAP)<br>methodology, namely an analysis of the change in<br>vehicle-km travelled by each mode of vehicle<br>resulting from implementation of the BRT and<br>subsequent mode changes from less fuel-efficient<br>vehicles to BRT. The overall changes in fuel<br>consumption and emissions were derived from the<br>vehicle-km travelled. |
| Improvement of air quality<br>(despite economic and traffic<br>growth) as measured by<br>levels of PM, SOx, NOx, and<br>CO in the corridors   | Buses operating in<br>Johannesburg had an average<br>model year of 2001 for buses<br>and 1997 for minibuses: that is<br>equivalent to a large number of<br>conventional buses that are<br>Euro II, Euro I or older                 | Euro IV Diesel Buses operating Rea Vaya Routes<br>would have PM emissions 20 times lower and NOx<br>3 times lower than Euro 1.   |
| Decrease in ambient noise   | No reduction   | No significant change. Rea Vaya bus noise output   |
| Objective: The promotion of<br>system in South Africa, man<br>mobility and accessibility.<br>Transport Systems<br>improving modal shift,<br>efficiency and mobility for the<br>selected interventions | a safe, reliable, efficient, co-ordin<br>aged in an accountable way, to e<br>In 2009, Johannesburg had<br>over 800,000 private cars,<br>40,000 motorcycles, 50,000<br>taxis and 50,000 public transit<br>mini-buses and buses, and | 585 mini-bus taxis removed from service in Phase<br>1A and replaced by 82 articulated and 195<br>complementary buses.  |
| Public perception of public<br>transport in the selected<br>corridors is improved by 50%  | None   | 85% of surveyed persons satisfied or very satisfied  |
| Person trips on sustainable<br>modes increased by 20%   | None   | 6.9 million (annual ridership from August 2013 to July 2014). This translates into more than 20,000 person-trips per weekday.  |
| Outcome: Implementation of  | Rea Vaya BRT system in Johann  | nesburg  |
| Financial sustainability:<br>Public Transport subsidy<br>payments to operators for<br>services in the corridor  | Minibus taxi operators not<br>subsidized. Rea Vaya<br>not operational  | Rea Vaya not economically viable on transport<br>benefits alone (benefit-cost (B/C) ratio = 0.82).<br>If broader societal benefits are included, B/C<br>improves to 1.14.  |
| Social equity: fare per km of the transport system  | No change  | Average cost per trip on Rea Vaya was USD 0.93<br>(R10.20). Normalised <u>saving</u> per trip over other<br>modes was R 0.20   |
| Social equity: Number of<br>low-income users or<br>households within 500m of<br>improved transport system   | No change  | 80% of users low-income ( <usd 550="" 6,000="" or="" per<br="" r="">month)<br/>532,000 people within 800 m of route</usd>  |
| Traffic conditions in morning<br>peak<br>along BRT networks:  | Bus speed 25 kph and 30 kph<br>on BRT and feeder routes<br>respectively.<br>Car & taxi speed = 26.9 kph on<br>trunk and complimentary routes<br>and 40 kph on feeder routes  | Rea Vaya bus speed of 30.6 kph and 30 kph on<br>BRT and feeder routes respectively.<br>Car & taxi speeds unchanged   |

| Table 3: Rea Vaya | BRT in | Johannesburg |
|-------------------|--------|--------------|
|-------------------|--------|--------------|

- Phase 1A was operational in August 2009 with 25.5 kilometres, 27 stations and 143 buses sufficient to transport 70,000 passengers per day. Two feeder services were opened in May 2010;
- Phase 1B was introduced in October 2013 as an alternative route from Soweto to the CBD with 43.5 kilometres, 43 stations and 277 buses to transport 137,000 passengers per day.

Occupancy for buses on Phases 1A and 1B, however, are in the order of 46%<sup>32</sup>. As a result, Rea Vaya has been subsidised to the extent of 50-70% of its operational costs. Complete handover of the BRT to the taxi association was completed in February 2011.

The cost of Project technical assistance for the Rea Vaya BRT was USD 3.57 million. Considering the outcome of the assistance provided by the Project to the CoJ, the *Project assistance can be evaluated as Highly Satisfactory in terms of relevance, effectiveness and efficiency*. Notwithstanding the fact that Phases 1A and 1B are highly subsidised, the CoJ will generate more economic benefits that over time will reduce the current subsidy levels. Expansion plans of the CoJ for the BRT for Rea Vaya include a Phase 1C which will connect the Johannesburg CBD with Sandton, a wealthier suburb to the north that will likely experience a higher occupancy rate due to the location of business activities at both terminuses of the route.

#### Activity 1.1.2: Integrated Public Transport System in Nelson Mandela Bay (NMB)

Outcomes of this activity can be found on Table 4, which provides outcomes reported against indicators from the goal and objective of the Project and the desired outcome of the component. Project assistance was provided to NMB to assist in the establishment of its IPTS, a system that would emphasise the integration of mini-bus taxis with the new public transit system. The IPTS was based on NMB's "Plans for Public Transport Plan" (PTP), which was completed in 2004 and based on traffic modeling with a baseline of 41% private car use, 26% public transport and 33% walking. Prior to the 2010 FIFA World Cup, assistance was provided to NMB for:

- <u>Operational planning</u>, consisting of planning of the Khulani corridor, passenger forecasting, strategy for financing operations, preparation of passenger information, ensuring regulatory readiness, establishment of control and call centers, preparation of the public transport business plan, verification of income levels of taxi operators to determine levels of compensation, verification of numbers of operating taxis, determination of the optimal IPTS fleet size, preparation of contract negotiations for operator, and the operationalisation of 25 new buses;
- <u>Establishment and capacity development of new operators</u>, comprising assistance in business development, advice to the operators on the appropriate legal entity, such as a cooperative, to best serve the industry, provision of advice on financial viability of the new operation, formation of a legal entity with shareholder agreements and company constitution, establishment of training courses, and assistance in ensuring a legal entity able to function effectively. In addition, assistance was provided to set up and implement an integrated ticketing system between different modes of transport, convert minibuses to larger bus vehicles, and the operation of the IPRT;

<sup>&</sup>lt;sup>32</sup> This is a result of high occupancy out of Soweto in the morning and into Soweto in the late afternoon. The opposite directions have low occupancy.

- <u>Establishment of the Transport Administrative Agency (TAA)</u>, comprising completion of the organisational structure and staff descriptions as well as the business and operational plans. The TAA, however, was not established during the Project duration, and the staffing recruitment had only commenced after the Project was completed in December 2013;
- <u>Systems design and contracts</u>. This included selection of fleet characteristics, bus station designs, fare collection systems, preparation of budgets required for PTSIG, and preparation of standard operational plans (SOPs) for station management and inspections of the system; and
- Baseline and post-project evaluations.

With an expenditure of USD 2.38 million by the Project for NMB, the assistance to NMB for setting up of an IPTS was extensive but not completed as of December 31, 2013. During the Evaluation mission of August-September 2014, the TAA office was already in place and staffed by 5 persons. The main BRT route through the Govern Mbeki-Stanford Road corridor, however, was not operational. The 25 articulated buses purchased for the 2010 FIFA World Cup games were successfully used during the Games but were subsequently parked pending the completion of negotiations between the main taxi association and the Municipal Government of NMB.

After the 2010 WC events were completed, NMB ran pilot bus services for the IPTS during the January-November 2013 period. During this period, negotiations between NMB and affected minitaxi associations had broken down. To some extent, the 4% occupancy rate of the IPTS during the 2013 pilot period was a result of the long, drawn-out negotiations and the lack of promotion of the IPTS public transport services.

While these negotiations between the mini-taxi associations and the NMB Municipality continue in 2014, NMB Municipality continues construction of its expansion of the BRT route along Stanford Road corridor to the north. While the PTSIG budgets for such construction works have not yet been exhausted, the Govern Mbeki-Stanford Road bus corridor expansion is currently being extended notwithstanding the current lack of an agreement between the City and existing public transit operators.

The outcome of Project assistance has resulted in the partial establishment of infrastructure for an IPTS – i.e. BRT routes that are integrated with all transport modes, including mini-bus taxis. BRT station designs are ready for construction. PTSIG funds have been sufficient for the completion of 9 km of dedicated bus lanes from CBD to Nelson Mandela Stadium, with another 6 km beyond the Stadium along Stanford Road currently under construction. In addition, 25 articulated buses were procured.

The "big bang approach" that was chosen by the Municipality of NMB to transform public transport was, in hindsight, not the correct approach given that the effort involved in negotiations with the mini-taxi associations was not given more time and effort to complete. Despite the procurement of buses that were used during the 2010 FIFA World Cup, the bus system was only operational on 7 pilot routes during the January-November 2013 period. The Evaluator was not able to meet anyone from NMB Municipality; however, from several informal discussions with a number of persons in NMB familiar with the IPTS, a level of mistrust had developed during the negotiation process between the City and the taxi union over guaranteed profits. The original intention of choosing pilot routes so as to avoid major competition with existing taxi associations has not resulted in the intended outcome. *In consideration of the Project*
# expenditure of USD 2.38 million expended, the outcome of this activity has been Moderately Unsatisfactory.

| Indicator  | Baseline   | End-Of-Project (EOP) Outcome                                  |  |
|--|--|---|--|
| Goal: To reduce greenhouse                             | gases (GHG) from urban trans   | portation in South African cities through                     |  |
| the promotion of a long-term                           | the promotion of a long-term modal shift to more efficient and less polluting forms of transport |   |  |
| Reduction in GHG emissions                             | 31.8 tonnes CO <sub>2</sub> /km/day on   | An estimated reduction of 28.2 tonnes CO <sub>2</sub> /km/day |  |
| associated with  | pilot routes   | on pilot routes where reductions are attributable to          |  |
| modal shifts and higher                                |  | lower volumes, <u>not</u> modal shift.                        |  |
| transport system efficiency                            | Conventional busca are   | Fure IV disset buses have DM emissions 20 times               |  |
| improvement of air quality                             | conventional buses are   | Leuro IV diesei buses have PM emissions 20 times              |  |
| (despite economic and traine<br>growth) as measured by | Furo Lor older   | are only operational on pilot routes                          |  |
| levels of PM, SOx, NOx and                             | Minibus taxis: 49% petrol and  | are only operational on phot routes.                          |  |
| CO in the corridors                                    | 51% diesel   |   |  |
| Decrease in ambient noise                              | Not measured   | Not measured  |  |
| levels in the corridors                                |  |   |  |
| <b>Objective:</b> The promotion of                     | a safe, reliable, efficient, co-or   | dinated and integrated urban passenger                        |  |
| system in South Africa, man                            | aged in an accountable way, to   | ensure that people experience improving levels of             |  |
| mobility and accessibility.                            |  |   |  |
| Transport Systems                                      | No change  | Pilot bus services operating at 4% occupancy.                 |  |
| improving modal shift,                                 |  | No taxi vehicles removed from service.                        |  |
| efficiency and mobility for the                        |  |   |  |
| Public perception of public                            | Nono   | Not measured due to termination of Pilot Service              |  |
| transport in the selected                              | None   | Not measured due to termination of Phot Service.              |  |
| corridors is improved by 50%                           |  |   |  |
| Person trips on sustainable                            | None   | 1.845 (daily ridership on pilot routes in 2013)               |  |
| modes increased by 20%                                 |  |   |  |
| Outcome: Implementation of                             | a public transit system in NME   | 3   |  |
| Financial sustainability:                              | Mini-bus taxi operators not  | R30 million operational deficit for 11-month IPTS             |  |
| Public Transport subsidy                               | subsidised and IPTS not  | operations on pilot routes.                                   |  |
| payments to operators for                              | operational  |   |  |
| services in the corridor                               |  |   |  |
| Social equity: fare per km of                          | No change  | Average fare of USD 0.70 (R 7.50) on IPTS pilot               |  |
| the transport system                                   |  | route.  |  |
| Social equity: Number of                               | No change  | 2,700 low-income households within 500 m of                   |  |
| Iow-Income users or                                    |  | IPIS stops (74% of all households served are low-             |  |
| improved transport eveters                             |  | income).  |  |
| Traffic conditions in morning                          | Varias per route and along   | Negligible change consisting of reduction of 120              |  |
| neak along IPTS networks:                              | route Average 14 br vehicle  | minipus taxi trips per day on all routes combined             |  |
| peak along it to hetworks.                             | volume per route = 15.000  | mini-bus taxi trips per day on an routes combined.            |  |

### Table 4: Public Transport System in Nelson Mandela Bay (NMB)

<u>Output 1.2: Road management and transport system efficiency improvements (High-Occupancy Vehicle (HOV) lanes in Mbombela)</u>

Outcomes of this activity can be found on Table 5, which provides outcomes reported against indicators from the goal and objective of the Project and the desired outcome of the component.

The HOV lane on R40 was constructed to reduce the carbon intensity of each passenger-km traveled by allowing higher occupancy vehicles access to a lane that is restricted to vehicles with more than one passenger. An HOV lane was constructed in

2009 and 2010 prior to the World Cup games. A 4.7 km section in the CBD was completed in 2010 for the Games. Another 2.7 km section north and 5.7 km section south of Mbombela was completed in late 2013. The Municipality of Mbombela (MoMb) hired its own local consulting engineers to assess the safety, NMT measures, signage, mitigating measures, proper usage of HOVs, cost estimates, and legalities and enforcement. The lane is currently used as a free lane without enforcement.

| Indicator                   | Baseline                              | End-Of-Project (EOP) Outcome                        |
|-----------------------------|---------------------------------------|---|
| Goal: To reduce greenhou    | se gases (GHGs) from urban tr         | ansportation in South African cities through        |
| the promotion of a long-te  | rm modal shift to more efficien       | t and less polluting forms of transport             |
| Reduction in GHG            |                                       | 61,000 tCO <sub>2</sub> were reduced due to reduced |
| emissions associated with   |                                       | congestion over ten years                           |
| modal shifts and higher     |                                       |   |
| transport system            |                                       |   |
| efficiency                  |                                       |   |
| Improvement of air quality  | Not measured                          | Not measured  |
| (despite economic and       |                                       |   |
| traffic growth) as          |                                       |   |
| measured by levels of PM,   |                                       |   |
| SOx, NOx, and CO in the     |                                       |   |
| corridors                   |                                       |   |
| Decrease in ambient         | Not measured                          | Not measured  |
| noise levels in the         |                                       |   |
| corridors                   |                                       |   |
| Objective: The promotion o  | f a safe, reliable, efficient, co-ord | inated and integrated urban passenger system        |
| in South Africa, managed in | an accountable way, to ensure the     | nat people experience improving levels of           |
| mobility and accessibility. |                                       |   |
| Transport Systems           | Peak Hour mode split is               | No modal shift                                      |
| improving modal shift,      | 60% bus, 21% taxi and                 |   |
| efficiency and mobility for | 19% private.                          |   |
| the selected interventions  |                                       |   |
| Public perception of public | None                                  | HOV lane concept was not understood,                |
| transport in the selected   |                                       | resulting in use by general traffic and not         |
| corridors is improved by    |                                       | reducing carbon-intensive journeys                  |
| 50%                         | N                                     |   |
| Person trips on             | None                                  | 8,000 people from low-income households use         |
| sustainable modes           |                                       | R40 route   |
| Increased by 20%            | of D40 UOV lana in Mhamhala           |   |
| Outcome: Implementation     | of R40 HOV lane in Mibombela          |   |
| Financial sustainability:   |                                       |   |
| Public Transport            |                                       | Netennicable  |
| subsidy payments to         |                                       | Not applicable                                      |
| the corridor                |                                       |   |
| Capiel equity fore per km   | No obongo                             | Cignificant increases in public transport force     |
| of the transport            | No change                             | Significant increases in public transport lares     |
| system                      |                                       | due to increased fuer prices                        |
| Social equity: Number of    | No change                             | 8 000 people from low income households use         |
| low income users or         | No change                             | 8,000 people iron low-income nouseholds use         |
| households within 500m      |                                       | 14010016  |
| of the improved             |                                       |   |
| transport system            |                                       |   |
| Traffic conditions in       | 2 direction traffic volume            | Delay time reduced by 174 000 vehicle bro/vr        |
| morning neak along HOV      | between 3 900 and 5 700 yph           | being time reduced by 174,000 vehicle-115/yl        |
| lanes in Mhombela           | in 2010                               |   |
| iunoo in moonibolu.         | 11 2010.                              |   |

| Table et figh eeeapaney femele Lane in insembera |
|--|
|--|

Initial discussions with MoMb were about how the SPTS Project could assist the Municipality's preparations for the 2010 World Cup games. Project assistance consisted only of the marketing and awareness plan as well as baseline and post-evaluation. Other aspects of WC preparations, such as law enforcement and public transport planning, were completed with other resources. There was no investment in road safety, implementation assistance and capacity development. The Evaluator did not visit Mbombela; however, a chance meeting with a Mbombela official during the mission revealed that the concept of HOV was never properly enforced, with many users thinking the HOV lane was an expansion for more traffic. The SPTS-supported marketing and awareness campaign for the HOV lane was not effective given that marketing and communications were only conducted during the construction of the HOV lane, and not sustained after the conclusion of the WC. A lesson to be learned from this experience is that awareness-raising efforts need to be sustained for new sustainable transport measures, and not only during the construction phase.

In consideration of the Project expenditure of USD 96,037 in Mbombela, and the outcome that the HOV lane is no longer used for purposes as intended, this activity is deemed Unsatisfactory.

### Output 1.3: Non-motorised transport (NMT) in Polokwane, Mangaung and Rustenburg

NMT facilities were planned for three cities: Polokwane, Manguang and Rustenburg, as described in the following three activities.

### Activity 1.3.1: NMT Facilities for Polokwane

Outcomes of this activity can be found in Table 6, which provides outcomes reported against indicators from the goal and objective of the Project and the desired outcome of the component. The Evaluator did not visit Polokwane during the mission.

Works in Polokwane consisted of a 3.2 km pedestrian walkway and 3.0 km bikeway that were completed in time for the WC. SPTS resources were used for the planning and design of these NMT facilities as well as the preparation of the Polokwane Integrated Urban Realm and Movement Plan (PIURMP) to prepare the City for the WC events and enhance the city's image after 2010. Polokwane Municipality also used the PIURMP to support and supplement the planning commissions for the Integrated Rapid Public Transport Network (IRPTN), Bus Rapid Transit (BRT) and Comprehensive Integrated Transport Plan (CITP), all of which were underway in 2013. The SPTS resources were also applied to implementation assistance and the baseline post-project evaluation. Post-project evaluations indicate that there has been a probable increase in the use of the NMT facilities, and likely a slight modal shift away from the use of informal public transport.

In consideration of the Project expenditures of USD 894,651, and the outcome of modal shifts from taxis to walking with follow-up by the Municipality to implement the PIURMP, this activity can be rated as Satisfactory.

| Indicator                   | Baseline                         | End-Of-Project (EOP) Outcome                                      |
|-----------------------------|----------------------------------|---|
| Goal: To reduce greenhou    | se gases (GHGs) from urban tr    | ansportation in South African cities through                      |
| the promotion of a long-te  | rm modal shift to more efficien  | t and less polluting forms of transport                           |
| Reduction in GHG            |                                  | Minor reduction likely but not able to be                         |
| emissions associated with   |                                  | directly attributed to the NMT works.                             |
| modal shifts and higher     |                                  |   |
| transport system            |                                  |   |
| efficiency                  |                                  |   |
| Improvement of air quality  | Not measured                     | Not measured  |
| (despite economic and       |                                  |   |
| traffic growth) as          |                                  |   |
| measured by levels of PM,   |                                  |   |
| SOX, NOX, and CO in the     |                                  |   |
| Corridors                   | Not monourod                     | Not moonured  |
| poise levels in the         | Not measured                     | Not measured  |
| corridors                   |                                  |   |
| Objective: The promotion    | of a safe reliable efficient co- | ordinated and integrated urban passenger                          |
| system in South Africa, m   | anaged in an accountable way.    | to ensure that people experience improving                        |
| levels of mobility and acce | essibility.                      | to one and people experience improving                            |
| Transport Systems           | Average vehicle volume           | Average vehicles (2014) at same sites = 5.640                     |
| improving modal shift,      | (2009) at 6 sites on NMT         | per day. Reduced traffic volume at some sites                     |
| efficiency and mobility for | routes = 5,820 per day           | although it is unclear whether this can be                        |
| the selected interventions  |                                  | attributed to the NMT facilities or other factors.                |
|                             |                                  | Average NMT users at same 6 sites = 1,950                         |
|                             |                                  | per day. Users report increased frequency of                      |
|                             |                                  | NMT trips, therefore some mode shift to NMT                       |
|                             |                                  | is probable   |
| Public perception of public | Not operational                  | 58% of users rated design of facilities                           |
| transport in the selected   |                                  | excellent but cleanliness and maintenance                         |
| corridors is improved by    |                                  | rated lower. 78% rated personal safety on                         |
| 50%                         | N                                | NMT facility as fair to excellent                                 |
| Person trips on             | None                             | Average NMT users at same 6 sites = 1,950                         |
| sustainable modes           |                                  | per day.  |
| Increased by 20%            | of NMT in Delekwane              |   |
| Financial sustainability    |                                  |   |
| Public Transport subsidy    |                                  |   |
| navments to operators for   |                                  | Not applicable  |
| services in the corridor    |                                  | Not applicable  |
| Social equity: fare per km  | No change                        | 70% of users walking instead of using public                      |
| of the transport            | No onango                        | transport thus saving PT fare                                     |
| system                      |                                  |   |
| Social equity: Number of    | No change                        | 36% of users earn <r3.000 and<="" month="" per="" td=""></r3.000> |
| low-income users or         |                                  | 32% between R3,000 & R6.000.                                      |
| households within 500m      |                                  |   |
| of the improved transport   |                                  |   |
| system                      |                                  |   |

### Table 6: Non-motorised transport in Polokwane

### Activity 1.3.2: NMT Facilities for Manguang

Outcomes of this activity can be found in Table 7, which provides outcomes reported against indicators from the goal and objective of the Project and the desired outcome of the component. The Evaluator did not visit Manguang during the mission.

| Indicator                      | Baseline                            | EOP Outcome                                   |
|--------------------------------|-------------------------------------|---|
| Goal: To reduce greenhou       | ise gases (GHGs) from urban tr      | ansportation in South African cities through  |
| the promotion of a long-te     | rm modal shift to more efficien     | t and less polluting forms of transport       |
| Reduction in GHG               |                                     | Minor reduction likely but unable to directly |
| emissions associated with      |                                     | attribute this to NMT works.                  |
| modal shifts and higher        |                                     |   |
| transport system               |                                     |   |
| efficiency                     |                                     |   |
| Improvement of air quality     | Not measured                        | Not measured                                  |
| (despite economic and          |                                     |   |
| traffic growth) as             |                                     |   |
| measured by levels of PM,      |                                     |   |
| SOx, NOx, and CO in the        |                                     |   |
| corridors                      |                                     |   |
| Decrease in ambient            | Not measured                        | Not measured                                  |
| noise levels in the            |                                     |   |
| corridors                      |                                     |   |
| Objective: The promotion       | of a safe, reliable, efficient, co- | ordinated and integrated urban passenger      |
| system in South Africa, m      | anaged in an accountable way,       | to ensure that people experience improving    |
| levels of mobility and acco    | essibility.                         |   |
| Transport Systems              | Average venicle volume              | Average NMT users (2014) at 2 sites on        |
| improving modal shift,         | (2009) at 6 sites on NWT            | Selbourne Ave = $2,700$ per day.              |
| the selected interventions     | roules – 5,620 per day              | day 00% of users report increased frequency   |
| the selected interventions     |                                     | of NMT trips: some model shift to NMT is      |
|                                |                                     | probable                                      |
| Public perception of public    | Not operational                     | 60% of users rated design of facilities       |
| transport in the selected      |                                     | excellent, 70% rated cleanliness and          |
| corridors is improved by       |                                     | maintenance as fair or excellent.             |
| 50%                            |                                     |   |
| Person trips on                | None                                | Average NMT users (2014) at 2 sites on        |
| sustainable modes              |                                     | Selbourne Ave = 2,700 per day.                |
| increased by 20%               |                                     |   |
| <b>Outcome: Implementation</b> | of NMT in Manguang                  |   |
| Financial sustainability:      |                                     |   |
| Public Transport               |                                     |   |
| subsidy payments to            |                                     | Not applicable                                |
| operators for services in      |                                     |   |
| the corridor                   |                                     |   |
| Social equity: fare per km     | No change                           | 90% of users walking instead of using public  |
| of the transport               |                                     | transport, thus saving PT                     |
| Social equity: Number of       | No chango                           | 100 of users each < P3 000 per month and      |
| low-income users or            | No change                           | 20% between R3 000 & R6 000                   |
| households within 500m         |                                     | 2070 Detween 113,000 & 110,000.               |
| of the improved                |                                     |   |
| transport system               |                                     |   |

| Table 7: | Non-motorised | transport in | Manguang |
|----------|---------------|--------------|----------|
|----------|---------------|--------------|----------|

SPTS resources were applied to:

 The development of the 1.2 km Selbourne Avenue pedestrian route linking the CBD and a shopping mall with bus and taxi stands near the Central Railway Station. Assistance was provided in the survey, planning and detailed design of a pedestrian bridge at Selbourne Ave, preparation of tender documents, implementation support and project management. GEF funds were also used for baseline and post-project evaluation; • Project management and consulting services towards the development of the Manguang Multimodal Integrated Public Transport (MMIPT) facility that was designed to serve as a hub for local and long-distance minibus taxis with extensive space for retail and commercial activity.

The DoT has indicated that the MMIPT facility that was funded with PTISG grant funds is not being properly used. The issue is likely over the void of ownership of the facility and the absence of an entity to operate the facility. The operational aspects of the MMIPT facility, however, are not covered under the PPM of this Project. <u>In consideration of the Project expenditures of USD 871,726 in Manguang, and the outcomes of modal shifts from taxis to walking and the successful completion of the intermodal transport facility, this activity can be rated as Satisfactory.</u>

### Activity 1.3.3: NMT Facilities for Rustenburg

Rustenburg is a city of 300,000, located approximately 200 km west of Pretoria in one of the country's hubs for the large platinum mining industry. Outcomes of this activity for Rustenburg can be found in Table 8, which provides outcomes reported against indicators from the goal and objective of the Project and the desired outcome of the component.

SPTS resources were applied to the planning and design of 14.15 km of NMT infrastructure near the Phokeng Stadium. While the scope of work for engineering consultants for the NMT system around Phokeng was prepared in 2007 and the tender awarded to the consultant, Bigen Africa, in early 2008, the services were carried out before the commencement of SPTS in July 2008. Given the "late" start of SPTS in April 2008, SPTS resources for this professional services contract for NMT development were utilised through a "no objection" letter and the mechanism described in Section 3.2.1. This was done since the contract was similar in scope and nature to the NMT infrastructure to be implemented under the original proposal in the Project Document.

In 2007, the PT Strategy and Action Plan approved by Cabinet selected Rustenburg as one of 13 cities in South Africa to receive support from National Treasury Grants for improving public transit through the PTISG. The SPTS provided technical assistance and capacity building support to the Rustenburg Integrated Public Rapid Transport Network (IPTRN), the public transport entity responsible for the development of improved and modern transport systems for Rustenburg. Planning between 2008 and 2010 was to be completed with an operational plan (i.e. data collection and modelling, route and corridor structure, intersection design and signal phasing, traffic impact study, vehicle specs, skill transfers), fare system, business and financial plans, marketing and communications plan, call for proposals for infrastructure and major PT nodes.

The USD 301,049 provided from SPTS to the IPTRN was recognised as a small contribution to the total resources needed for such an effort. The company successfully engaged by the Rustenburg IPTRN was Namela Projects, which is still under contract with the IPTRN with funds from Rustenburg City. The Rea Vaya BRT has also had some influence on the planning of the Rustenburg IPTRN; many of the lessons learned in Rea Vaya were taken into account during the implementation of the IPRTN in 2011.

| Indicator                   | Baseline                         | End-Of-Project (EOP) Outcome                                      |
|-----------------------------|----------------------------------|---|
| Goal: To reduce greenhou    | se gases (GHGs) from urban tr    | ansportation in South African cities through                      |
| the promotion of a long-te  | rm modal shift to more efficien  | t and less polluting forms of transport                           |
| Reduction in GHG            | Not measured                     | Minor reduction likely but not able to be                         |
| emissions associated with   |                                  | directly attributed to the NMT works                              |
| modal shifts and higher     |                                  |   |
| transport system            |                                  |   |
| efficiency                  |                                  |   |
| Improvement of air quality  | Not measured                     | Not measured  |
| (despite economic and       |                                  |   |
| traffic growth) as          |                                  |   |
| Sox Nox and Co in the       |                                  |   |
| SOX, NOX, and CO III the    |                                  |   |
| Decrease in ambient         | Not measured                     | Not measured  |
| noise levels in the         | Not measured                     | Not measured  |
| corridors                   |                                  |   |
| Objective: The promotion    | of a safe reliable efficient co- | ordinated and integrated urban passenger                          |
| system in South Africa. m   | anaged in an accountable way.    | to ensure that people experience improving                        |
| levels of mobility and acce | essibility.                      |   |
| Transport Systems           | Average vehicle volume           | 14.15 km of walkways operational for 2010                         |
| improving modal shift,      | (2009) at 6 sites on NMT         | FIFA WC. Average NMT users (2014) at 8                            |
| efficiency and mobility for | routes = 5,820 per day           | sites = 1,000 per day. Average vehicles at                        |
| the selected interventions  |                                  | same 5 sites = 8,000 per day. 46% of users                        |
|                             |                                  | report increased frequency of NMT trips,                          |
|                             |                                  | indicating some modal shift to NMT is                             |
|                             |                                  | probable  |
| Public perception of public | Not operational                  | 75% of users rated design of facilities                           |
| transport in the selected   |                                  | excellent.  |
| corridors is improved by    |                                  | 50% rated cleanliness and maintenance as                          |
| 50%                         | Nege                             | Tair or excellent.  |
| Person trips on             | None                             | Average NMT users (2014) at 8 sites = 1,000                       |
| increased by 20%            |                                  | per day.  |
| Outcome: Implementation     | of NMT in Rustenburg             |   |
| Financial sustainability:   |                                  |   |
| Public Transport subsidy    |                                  |   |
| payments to operators for   |                                  | Not applicable  |
| services in the corridor    |                                  |   |
| Social equity: fare per km  | No change                        | 90% of users walking instead of using public                      |
| of the transport system     |                                  | transport, thus saving PT fare.                                   |
| Social equity: Number of    | No change                        | 50% of users earn <r3,000 and<="" month="" per="" td=""></r3,000> |
| low-income users or         |                                  | 20% between R3,000 & R6,000.                                      |
| households within 500m      |                                  |   |
| of the improved transport   |                                  |   |
| system                      |                                  |   |

| Table 8: Non-me | otorised transp | ort in Rus | tenburg |
|-----------------|-----------------|------------|---------|
|-----------------|-----------------|------------|---------|

Implementation of the system is currently in progress. With most of the concrete bus lanes having been constructed, construction of the stations has not yet commenced although the designs and construction drawings are ready. More bus lanes are being laid down to the north-east, where the mining industries are located; the corridors between the mining areas and the CBD experience heavy traffic. Although the population density of Rustenburg is sparse, around 84% of its residents do not own a motor vehicle. As such, ridership on the system should be high, although the operation will likely be subsidised based on the cost of the system. The north-east corridor is expected to have higher occupancy levels due to the potential for two-way high occupancies of the route.

In consideration of the total Project expenditures of USD 368,533 in Rustenburg and the outcomes of modal shifts from taxis to walking, and the current implementation of the Rustenburg IPTRN project, this activity can be rated as Satisfactory.

### Output 1.4: Travel Demand Management (TDM) in Cape Town

Outcomes of these activities for Cape Town can be found on Table 9. TDM was a priority of the City of Cape Town due to the need to reduce traffic congestion in Cape Town. With peak rush-hour periods reaching 3 hours, more than 66% of the vehicles during 2008 were observed to be single-occupancy, travelling at low speeds. Moreover, average commuter distances are greater than 17.5 km, with transport energy consumption accounting for more than 25% of the region's GHG emissions.

The Project Document provided 3 measures to address the traffic congestion:

- Park-and-ride facilities at suburban railway stations;
- Large employers programme for vehicle sharing; and
- Promotion of high-occupancy vehicles, which were subsequently removed due to legal liability issues related to the City's involvement with ride-sharing schemes.

GEF resources were provided to assist in developing more than 16 park-and-ride facilities in 2008, in time for the WC. This expanded into drop-and-go (kiss-and-ride) and integration of the facility with walking and cycling infrastructure. Resources were applied to the concept designs, detailed designs, tender documentation, legal land title agreements, business plans and marketing strategies.

The Project also provided support to the City's "TravelSMART" programme and identification of large employers to participate in pilots for trip reduction programmes. GEF resources were used to assist Cape Town in securing partnerships formed for large employers (including the Provincial Government) and assisting them with identification of their travel needs so as to reduce congestion.

The City is continuing to improve urban mobility through current initiatives such as a SMART driver training program, staff share bike program and an ongoing study on improving the understanding of factors that would change travel behaviour and setting target groups for specific interventions.

Currently, the City is challenged by the complexity of rolling-out its programmes, where significant strategic buy-in from various interest groups is required. Additional challenges include the need for policy changes, overcoming voluntary participation with improved incentives and regulations, the need for dedicated resources for a coordinator with sufficient budget to enact changes, and the need for a strong communications plan for the programmes.

The baseline and post-project evaluation were funded and completed by the City of Cape Town.

In consideration of the total Project expenditures of USD 253,321 in Cape Town and the outcomes of Project assistance to assist in the planning of park-and-ride facilities and the TravelSMART programme, this activity can be rated as Satisfactory.

| Indicator Baseline           |   | End-Of-Project (EOP)                              |  |
|------------------------------|---|---|--|
|                              |   | Outcome   |  |
| Goal: To reduce greenhous    | e gases (GHGs) from urban transportation i      | n South African cities through                    |  |
| the promotion of a long-ter  | n modal shift to more efficient and less poll   | uting forms of transport                          |  |
| Reduction in GHG             | Not measured                                    | 4,000 tonnes (over 10 years for                   |  |
| emissions associated with    |   | three stations)                                   |  |
| modal shifts and higher      |   | 2,700 tonnes (over 10 years in 3                  |  |
| transport system efficiency  |   | Large Employers Programme <sup>33</sup> )         |  |
| Improvement of air quality   | Not measured                                    | Not measured                                      |  |
| (despite economic and        |   |   |  |
| traffic growth) as measured  |   |   |  |
| by levels of PM, SOx, NOx,   |   |   |  |
| and CO in the corridors      |   |   |  |
| Decrease in ambient noise    | Not measured                                    | Not measured                                      |  |
| levels in the corridors      |   |   |  |
| Objective: The promotion o   | f a safe, reliable, efficient, co-ordinated and | integrated urban passenger                        |  |
| system in South Africa, ma   | naged in an accountable way, to ensure tha      | t people experience improving                     |  |
| levels of mobility and acces | sibility.                                       |   |  |
| Transport Systems            | Average vehicle volume (2009) at 6 sites        | See below   |  |
| improving modal shift,       | on NMT routes = 5,820 per day                   |   |  |
| efficiency and mobility for  |   |   |  |
| the selected interventions   |   |   |  |
| Public perception of public  | Not operational                                 | See below based on actual                         |  |
| transport in the selected    |   | usage of the TDM measures                         |  |
| corridors is improved by     |   |   |  |
| 50%                          | N 1   |   |  |
| Person trips on sustainable  | None  | See below for actual usage of                     |  |
| modes increased by 20%       | A TOM in Cone Town                              | I DM measures                                     |  |
| Outcome: Implementation of   | of IDWIN Cape Town                              | Deil voe ne in meneel 45% often                   |  |
| Usage of Park- n-Ride        | Average usage at upgraded stations,             | Rall usage increased 15% after                    |  |
| Tacilities                   | adjusted for growth at control (not             | upgrading. Previous mode                          |  |
|                              | upgraded) stations.                             | 58% mini bus $0%$ bus $2%$                        |  |
| Usage of carpooling:         |   | 5670, mmi-bus 570, bus 270.                       |  |
| <u>Osage of carpooling</u> . | 50km  | 47 km   |  |
| Average vehicle occupancy    | 1.6   | 47 KIII<br>1 7                                    |  |
| Single occupancy car usage   | 50%   | A1%   |  |
| Lift clube                   | 13%   | 16%   |  |
| Public Transport             | 34%   | 38%   |  |
| Active Mobility (NMT)        | 1%  | 2%  |  |
| Other                        | 2%  | 4%  |  |
| Participation of employers   | No change                                       | 50% of users earn <r3.000 per<="" td=""></r3.000> |  |
| in programme to encourage    |   | month and 20% between                             |  |
| employees to use more        |   | R3.000 & R6.000                                   |  |
| efficient transport modes    |   |   |  |

### 3.3.2 Outcome 2: Strengthened capacity

A summary of End-Of-Project (EOP) outcomes for Outcome 2 is provided on Table 10.

Output 2.1: Strengthened technical capacity in sustainable transport

This output was divided into a number of activities:

<sup>&</sup>lt;sup>33</sup> Based on actual survey responses, and not extrapolated to total employees in an organization.

| Indicator  | Baseline   | End-Of-Project (EOP) Outcome  |  |
|--|--|---|--|
| Objective: Increased capa<br>sustainable transportatio   | Objective: Increased capacity and strengthened local institutions (to plan, manage and implement sustainable transportation options) |   |  |
| Adoption of integrated<br>transport plan in the four<br>small venue cities that<br>focus on sustainable<br>transportation options  | Integrated Transport<br>Plans (ITPs) not<br>prepared   | ITPs were prepared for sustainable transport interventions<br>that were implemented in Mangaung, Mbombela, Polokwane<br>and Rustenburg.   |  |
| Key professionals from<br>all the venue cities in<br>different areas have<br>acquired knowledge on<br>different aspects of<br>sustainable<br>transportation through<br>training, workshops and<br>seminars and a web-<br>based information and<br>knowledge tool | Not operational  | Transport professionals from all venue cities obtained<br>knowledge from training, workshops and seminars. The web-<br>based information knowledge tool, however, was not open<br>for public use at the time of writing of this report.   |  |
| 30 people have:<br>1) obtained a degree in<br>transport planning, or<br>2) finished research<br>theme or<br>3) done internship<br>programme  | None   | <ul> <li>More than 51 people have completed transport skills development including:</li> <li>7 Masters-level postgraduate students have completed studies and research in Sustainable Transport</li> <li>17 Young Professionals completed on-the-job training in the DoT</li> <li>8 Young Professionals completed on-the-job training in the Road Traffic Management Corporation</li> <li>13 Young Professionals completed on-the-job training in District Municipalities</li> </ul>  |  |
| Outcome: Increased num<br>planning   | ber of post-graduate profe   | ssionals working in the area of transport   |  |
| Number of professionals<br>with a postgraduate<br>education in transport<br>planning and engineering<br>through the project  | No GEF-assisted training   | 7 Masters-level postgraduate students have completed studies and research in Sustainable Transport.   |  |
| Outcome: Increased info  | rmation and knowledge abo  | out sustainable transportation options  |  |
| Number of Workshops /<br>experience<br>sharing platforms   | No GEF-assisted<br>workshops   | <ul> <li>Short-term communications strategy completed during 2010<br/>FIFA World Cup including:</li> <li>Magazine and e-mag on low-carbon transport published</li> <li>Low-carbon document distributed at COP17</li> <li>Three full-day workshops on BRT with mobilisation of<br/>international speakers, held in conjunction with the<br/>South Africa Transport Conference (SATC) in July 2011,<br/>2012 and 2013.</li> <li>Collaboration with the Development Bank of South<br/>Africa (DBSA) with mobilisation of international speakers<br/>to present "Knowledge Week: delivering an integrated<br/>and sustainable transport network" in October 2012.</li> <li>Three one-day and three two-day workshops with<br/>Government, business and labour stakeholders held in<br/>conjunction with the World Wildlife Fund (WWF) for<br/>development of a low-carbon framework for the SA<br/>Transport Sector during 2013.</li> <li>Three two-day workshops on sustainable transport in<br/>Polokwane, Tshwane and Rustenburg.</li> </ul> |  |
| Web-based knowledge<br>resource tool   | No web-based<br>knowledge resource tool  | Sustainable Transport Information Portal completed and server capacity installed at DOT. Portal <b>not</b> open to public use   |  |

| Table 10: | Streng | ythening | Capa | acity |
|-----------|--------|----------|------|-------|
|-----------|--------|----------|------|-------|

- Activity 2.1.1: Academic research;
- Activity 2.1.2: On-the-job training of young professionals at the National Level;
- Activity 2.1.3: On-the-job training of young professionals at the Local Level.

### Activity 2.1.1: Academic research

Most of this activity was located at the University of Pretoria with 6 full-time students, and the University of Cape Town with one full time research student, all engaged in Master's degree thesis research on various topics of public and non-motorised transport. The topics chosen, in close collaboration with these universities, were all strongly related to the sustainable urban transport (SUT) interventions for all cities in South Africa, such as the "impacts of TDM on travel behaviour at the Cape Town park-and-ride facilities", "impact on BRT and land development and GHG reductions", and "analysis of the impact of the Gautrain on transit-oriented land development".

### Activity 2.1.2: On-the-job training for young professionals at the National Level.

Two programmes for on-the-job training for young professionals were provided at:

- The National level under the DoT. Project resources were utilised to link graduates from the DoT's Centres of Development (CODs) with the DoT's ongoing internship programme, and to provide these graduates with internships within various technical departments of DoT and line agencies. With 17 young professionals participating in training over a 12-month period on various topics including economic modeling, transport master plans, and transport regulation and corridor development, 13 young professionals completed the training from August 2010 to November 2012;
- The Road Traffic Management Corporation (RTMC), which had requested assistance to train young professionals to provide direct technical support to the RMTC, with an emphasis on strengthening road safety. Eight young professionals completed a 12-month training course delivered by RMTC between March 2012 and February 2013.

### Activity 2.1.3: On-the-job training for young professionals at the local level

Young professionals from 15 District Municipalities entered this training course, commencing in April 2012 for a period of 15 months, which focused on improving their skills in implementing integrated transport plans (ITPs). Likhanyile Consulting was hired to train and mentor these officers from the District Municipalities. Guidance was provided to the officers on executing projects for provincial and municipal ITPs. They were then asked to develop project proposals and work plans, and receive mentoring assistance from the training mentor once a week. Only 13 of these young professionals completed the entire District-level training, with six dropping out because staying in Pretoria for that length of time with only occasional trips home was not manageable for them.

The training was well received by all the young professionals. Moreover, a number of young professionals requested a continuation of the programme after the EOP, leading to some frustration over the lack of continuity. Some have since searched for additional training; however, there were no available Government funds for continuation of the training programme at the time this report was prepared.

### <u>Output 2.2: Increased information and knowledge about sustainable transportation options</u> <u>amongst local and national decision-makers and transport and urban planners</u>

### Activity 2.2.1: Skills audit of the South African Transport Sector

This was the only training activity implemented prior to the 2010 WC. As a means of ensuring trained drivers during the 2010 WC and afterwards, a skills audit of the various public transport operators throughout South Africa was undertaken in 2009 and after the 2010 WC. The audit provided an assessment of the capacity gaps after the WC; the human resources required for growth of public transport in all South African cities; evaluation of skills development initiatives undertaken prior to the WC and their achievements; MOUs with various Government training institutes, industry, academia, and RMTC for the testing of drivers; and identification and negotiation of special training needs on behalf of DoT at stakeholder committees. The document produced under this activity will provide a basis for strategic planning for increasing the number of personnel in public transport in South Africa along with the required skills for operation of modern public transit systems throughout South African cities.

### Activity 2.2.2: Increased knowledge and information through a web-based portal

A web-based knowledge portal was set up with Project assistance. Delays were associated with the delivery of the web portal design, from both the Project consultant and the GoSA.

A web portal structure was developed in consultation with transport officials, planners in the venue cities, and planners and academics in other cities as to what information and level of usefulness the portal would serve. The web portal consultant established the site as a learning tool to provide information of successful sustainable transport project experiences and methodologies in South Africa and other countries. Access to these web sites would provide a certain level of information according to the user's level of understanding of the topics. The Project purchased the server to host the web portal.

With the completion of the portal, DoT has experienced problems opening the site for public use. The problem lies between DoT and the State Information Technical Agency (SITA), which controls all hardware and IT procurement for the GoSA. Once this is approved, the DoT is ready to host the website and perform its maintenance.

### Activity 2.2.3: Short-Term Communication Strategies:

This included the following:

- <u>FIFA Fan Spot</u> advertising managed advertisements at FIFA Fan Parks throughout the country. This consisted of a 15-second video that was played 25 times a day for each of the 25 days of the tournament at 3 Fan Parks. The messaging was on sustainable transport and the use of public transit, as shown in Figure 1;
- <u>Production of various media materials and distribution</u> that included brochures printed at parks, fan events and embassies as shown in Figure 2. This included a full-colour one-page advertisement in Sawubona, the South African Airways in-flight magazine in July 2010;

Numerous other attempts were made to raise the profile of the Project through radio stations and outreach to journalists that were outside the scope of the Project. These attempts were unsuccessful since the radio stations had to honour previous programming commitments. <u>Since all deliverables of the consulting assignment were</u> *met, this activity is considered Satisfactory in terms of raising the profile of the Project.* 

Figure 1: Captured frames from FIFA Fan Spot Video



### Activity 2.2.4: Workshops

These included:

 South Africa Transport Conferences (SATCs) in July 2011, July 2012 and July 2013. Following DoT attendance at the July 2011 conference, an agreement was made with SATC and the DoT to jointly support BRT training at the SATC workshops in 2012 and 2013. GEF funding was also used to bring global transport experts to these workshops from Nigeria, Singapore, the United States and Indonesia;



### Figure 2: Sample Project Brochure

- Development Bank of South Africa (DBSA) Transport Knowledge Week in October 2012, in which GEF funds were used to bring in international transport experts from Australia and the United States;
- Workshops in collaboration with WWF in 2013. A total of six workshops focused on a WWF project on "Low-carbon framework for the South African transport sector" that adopted a systems dynamics methodology and modeling, requiring one-to-one meetings and work sessions with decision-makers and various experts;
- Sustainable transport skills transfer workshops. Three of these workshops were conducted in Polokwane in November 2013, and Tshwane (Pretoria) and Rustenburg in March 2014, and focused on the benefits and the means of promotion of NMT.

### Activity 2.2.5: Guide to Low-Carbon Transport.

This briefing document was published with the DoT wanting to provide an opportunity to raise the profile of the transportation sector and climate change at COP-17 of the United Nations Framework Convention on Climate Change (UNFCCC), which took place in Durban during November 28 to December 9, 2011. This was a rare opportunity for South African practitioners and transportation stakeholders to participate in climate discussions at this level. The document was published both as a glossy 32-page magazine and as an e-mag, and was distributed extensively at COP-17 by both UNDP and the DoT. The e-magazine can be viewed at:

http://issuu.com/rideloco2/docs/guidetolowcarbontransportcop17?mode=window&backgro undColor=%23222222

### 3.3.3 Outcome 3: Monitoring, learning, adaptive feedback and evaluation.

Activities associated with this outcome are related to the monitoring and evaluation of the Project as well as adaptive management. These activities are covered under Section 3.2 of this report.

### 3.3.4 Overall Results Relating to GHG Emission Reductions

The Project goal of SPTS was <u>to reduce greenhouse gas (GHGs) emissions</u> from urban transportation in South African cities through the promotion of a long-term modal shift to more efficient and less carbon intensive modes of transport.

The Project had a direct GHG reduction target of 423,000 tonnes  $CO_{2eq}$  set over a 10year period. Post-project monitoring reports were produced for Johannesburg and Cape Town with their own finances. The Project contributed to the baseline study for the Rea Vaya BRT in 2009, and post-project monitoring reports for all the other cities with poor local capacity to produce such reports. Notable observations on Project efforts made to estimate the GHG emission reductions include:

• The Project recognised the need to obtain baseline information prior to implementing the sustainable transport infrastructure at the 7 venue cities involved with the Project. However, in all cases (with the exception of Johannesburg), estimations of GHG reductions were made after the 2010 WC with the monitoring consultants using existing data (if available) from the various cities for baseline information. If not

available, the consultants resorted to anecdotal information from discussions with residents;

- NMT infrastructure was not expected to generate any significant GHG reductions;
- <u>No post-project direct emission reductions</u> were expected due to the absence of a GEF-supported revolving fund after the end of the project; and
- While the Project had a major impact on raising awareness of sustainable transport, an assumption is made that only <u>minor indirect emission reductions</u> have been achieved by the Project, for the following reasons:
  - There were GoSA actions prior to the commencement of the Project, in particular the "Transport Action Plan for 2010" (2006), that focused on improvements in coordinated and integrated transport planning and stricter road traffic enforcement to be able to cater for the needs of an estimated 3 million FIFA World Cup ticket holders. This led to the DoT, along with the National Treasury, setting aside around USD 500 million in the PTSIG for public transport and NMT infrastructure and systems aimed at supporting transport to the venues supporting the 2010 WC;
  - If a top-down approach to calculating indirect impacts were to be used, the "GEF causality factor" would be near-zero since the GEF contribution was weak, with most indirect emission reductions being attributable to the baseline;
  - If a bottom-up approach to calculating indirect impacts were to be used, the "GEF replication factor" would be in the order of 2.0 since some cities, such as Tshwane (Pretoria) and Rustenburg, had consultations with Rea Vaya BRT on its experiences in setting up a successful BRT system. As such, the bottom-up indirect GHG reductions can be estimated as being 2 times the direct GHG emissions of the Rea Vaya BRT system.

A brief summary of the GHG reduction estimations for each of the venue cities is provided below:

- <u>Rea Vaya BRT in Johannesburg</u>: This was conducted by Grutter Consulting using funds from the City of Johannesburg. They reported:
  - Direct emissions of 84,325 tonnes CO<sub>2eq</sub> during the 2012 and 2013 period; and
  - A direct 10-year emission reduction of 398,292 tonnes CO<sub>2eq</sub> over a 10-year period from 2012 to 2021.

These estimates were derived using the Transport Emissions Evaluation Models for Projects (TEEMP) model that is line with STAP guidance and CDM Methodology, AM0031, Version 03.1.0, *Baseline Methodology for Bus Rapid Transit Projects*. The CDM methodology is also consistent with Chapter IV of the "Step-by-Step Guide to Estimating Direct Impacts of Rapid Transit and Railway Projects" of the STAP methodology, where there is an analysis of the change in vehicle-km travelled by each vehicle mode. The BRT reflects this analysis in that there is a change from the highly polluting mini-taxi vehicles to the BRT that result in reductions to overall fuel consumption and emissions;

 <u>IPTS in Nelson Mandela Bay</u>. Due to the lack of a functional IPTS, and hence no resulting modal shifts, the GHG reductions for the IPTS in NMB are 0 tonnes CO<sub>2eq</sub>. A post-project monitoring and evaluation report of the NMB IPTS was conducted by Gibb Engineering and Architecture using NMB funding in early 2014. Though their resulting analysis using SIDRA TRIP<sup>34</sup> indicates slight GHG reductions using assumed 2009 and 2014 traffic composition, this is not due to modal shifts to the IPTS but instead to lower total vehicle volumes on the route in the 2014 case. Interestingly, the model also indicates a slight increase in emissions with the 2014 traffic composition with a functional IPTS and using 2013 passenger volume data. This can be explained by the fact that the buses were operating according to schedule but with very low ridership on the IPTS; with almost no modal shifts to public transport, this would have had the effect of increasing emissions due to operational buses with low occupancy;

- <u>The Mbombela HOV Lane</u>. The indicative estimate of GHG reductions resulting from the additional HOV lane on R40 is in the order of 18,300 tonnes CO<sub>2eq</sub> of direct emissions during the 2010-13 period, and 61,000 tonnes CO<sub>2eq</sub> over a 10-year period between 2010 and 2019. The baseline and post-project M&E report for Mbombela was prepared by Delca Systems (a Durban-based company) in 2014, and used both SIDRA<sup>35</sup> and VISUM<sup>36</sup> simulations that employ a more rigorous approach than the STAP methodology under the category Transportation Efficiency (Vehicle, Fuel, Network Efficiency) Projects in Chapter III. Since the HOV lane was never used for the purposes of priority for high-occupancy vehicles, there were no GHG reductions from modal switches but there have been GHG reductions resulting from increases in transport efficiency with the availability of the HOV lane;
- <u>Non-Motorised Transport projects for Polokwane, Manguang and Rustenburg</u>. The GHG reduction from these NMT projects is 0 tonnes CO<sub>2eq</sub>. The post-project evaluation studies conducted by Transport Futures and Arup in March 2014 did not reveal any significant or quantifiable GHG reductions from modal shift associated with switching of motorised trips to NMT<sup>37</sup>. This is consistent with the process for assessing that there was zero impact in the STAP manual;
- <u>Travel demand management in Cape Town.</u> The City of Cape Town financed baseline and post-project M&E reports for TDM and Travel Smart. They reported that:
  - Direct GHG reductions from the Cape Town Travel SMART TDM measure was estimated at 3,147 tonnes CO<sub>2eq</sub> during 2013, with the direct 10-year GHG reductions estimated at 31,474 tonnes CO<sub>2eq</sub> during the 2013 to 2022 period;
  - Direct GHG reductions from park-and-ride measures were estimated at 1,200 tonnes CO<sub>2eq</sub> during 2011 to 2013, with direct 10-year GHG reductions estimated at 4,000 tonnes CO<sub>2eq</sub> during the 2011 to 2020 period.

These reduction estimates were derived in accordance with Chapter VI of the STAP Manual, namely using before and after surveys to assess the reduction in vehicle-km of travel, and then applying emission factors per vehicle-type to estimate the daily GHG reduction. Daily figures were subsequently expanded to annual and ten-year figures.

<sup>&</sup>lt;sup>34</sup> This methodology is consistent with the methodology specified in the Chapter IV of the STAP Manual. The SIDRA TRIP user manual can be accessed at <u>http://www.sidrasolutions.com/downloads/SIDRATRIP\_UserGuide.pdf</u> <sup>35</sup> Ibid 34.

<sup>&</sup>lt;sup>36</sup> http://www.chinautc.com/information/manage/UNCC\_Editor/uploadfile/20081105144806983.pdf

<sup>&</sup>lt;sup>37</sup> Chapter V of the STAP manual defines the approach for calculating GHG reductions for pedestrian projects.

Table 11 provides the CO<sub>2</sub> reduction summary <u>according to the definitions of the GEF</u> <u>"Manual for Calculating GHG Benefits for GEF Transportation Projects" for direct, direct</u> <u>post-project and indirect emissions<sup>38</sup></u>.

| Direct emission reduction <sup>39</sup> due to SPTS activities, t CO <sub>2</sub>              | 106,972 |
|--|---------|
| Direct post-project emission reduction <sup>40</sup> due to SPTS activities, t CO <sub>2</sub> | 0       |
| Indirect emission reduction due to SPTS activities, t CO <sub>2</sub>                          |         |
| Top-down   | 0       |
| Bottom-up <sup>41</sup>  | 168,650 |
| TOTAL EMISSION REDUCTIONS DUE TO UNDP-IMPLEMENTED, GEF-FINANCED PROJECT, $tCO_2$               | 275,622 |

### Table 11: Summary of CO<sub>2</sub> Reductions from the Project

The Project had targets of "direct GHG reductions over a 10-year period". This was assumed as the continuation of a direct GHG reduction activity for 10 years after commencement of the activity. The estimate of the direct GHG reductions over a 10-year period is 494,766 tonnes  $CO_{2eq}^{42}$ , a number that exceeds the target of 423,000 tonnes  $CO_{2eq}$ . <u>This is therefore judged to be a Satisfactory outcome</u>.

### 3.3.5 Overall Evaluation of Project

<u>The overall rating of the Project is Satisfactory (S)</u>. This is based on the following outcomes:

- Successful use of all dedicated bus lanes, NMT facilities and TDM measures during the 2010 WC events that received support from SPTS;
- Meeting the original targets for GHG emission reductions of 423,000 tonnes CO<sub>2eq</sub> over a 10-year period;
- The significant contribution of SPTS to the successful operation of Rea Vaya BRT in Johannesburg that has resulted in a high-profile and functional BRT system;
- The lack of a functional IPTS system in NMB due to the failure of both the City Government of NMB and existing public transport operators to reach an agreement, despite SPTS support to assist existing bus and taxi operators in establishing and operating the business entities for the IPTS;
- Lack of proper usage of the HOV lane in Mbombela to provide priority to highoccupancy vehicles through congested areas despite SPTS support for awareness-

<sup>&</sup>lt;sup>38</sup> <u>http://www.thegef.org/gef/sites/thegef.org/files/publication/GEF\_CalculatingGHGbenefits\_webCD.pdf</u>

 <sup>&</sup>lt;sup>39</sup> Direct impacts include 84,325 tonnes CO<sub>2eq</sub> from Johannesburg, 18,300 tonnes CO<sub>2eq</sub> from Mbombela, 3,147 tonnes CO<sub>2eq</sub> from TravelSMART in Cape Town, and 1,200 tonnes CO<sub>2eq</sub> for park-and-ride measures in Cape Town generated during the Project period.

<sup>&</sup>lt;sup>40</sup> These are cumulative GHG reductions for a 10-year period after the EOP generated from sustainable transport initiatives financed by revolving funds established using GEF resources. No such funds were established by SPTS.

<sup>&</sup>lt;sup>41</sup> Assumed to be a replication factor of 2.0 of the direct GHG reductions of the Rea Vaya BRT in Johannesburg based on actual consultations that have taken place between Rea Vaya and the cities of Tshwane and Rustenburg.

<sup>&</sup>lt;sup>42</sup> This is a summation of the 10-year GHG reductions from Rea Vaya (398,292 tCO<sub>2</sub>), Mbombela (61,000 tCO<sub>2</sub>), and Cape Town (31,474 tCO<sub>2</sub> from TDM and 4,000 tCO<sub>2</sub> from park-and-ride measures).

raising of the proper usage of the HOV lane which was not sustained after the construction period of the HOV lane;

- Evidence of modal shifts from informal minibuses to walking in Polokwane, Manguang and Rustenburg where NMT facilities were constructed;
- Continued growth in the use of park-and-ride facilities and ride-sharing in Cape Town in an effort to reduce private car journeys from the outlying suburbs of the City to the CBD. Both of these measures received design and implementation plan support from SPTS;
- Completion of academic studies on topics closely related to sustainable transport in South Africa, and notably associated with some of the Project interventions related to Outcome 1;
- Delivery of training programmes related to sustainable transport and road safety with positive feedback from participants;
- Failure to launch to launch the web portal for sustainable transport information; and
- Delivery of well organised and messaged awareness-raising campaigns for sustainable transport during the 2010 WC events.

Overall project ratings are provided in Table 12.

### 3.3.6 Country Ownership and Drivenness

Sustainable pubic transport has been a high priority of the GoSA, as demonstrated by a series of policy documents including "Moving South Africa", the "White Paper on Energy", the "National Land Transport Transition Act" (NLTTA), the "National Land Transport Strategic Framework", the "Transport Action Plan for 2010" and the draft "Strategy to Accelerate Public Transport Implementation via a Win-Win-Win partnership between Government, Existing Operators and Labour". After the 2010 FIFA World Cup Tournament, the DoT issued its "Strategic Plan - Transport, the Heartbeat of Economic Growth and Social Development, 2010 to 2014". This plan essentially provides the impetus for, amongst other activities, the continuation of sustainable transport development efforts throughout South African cities. The Plan has subsequently had several updates, with the most recent Plan covering planned activities between 2013 to 2018.

In addition, South Africa was clear in its excitement to host the FIFA World Cup in 2010. The GoSA was very clear in its lead role in the preparation of this event. The events were intended to showcase South Africa as a tourist destination and a measure of South African industry capabilities. The Department of of Transport (DoT) embarked on a phased project to significantly improve public transport and coordinate planning for all layers of transportation services, infrastructure and management that to serve the 2010 FIFA World Cup and beyond. The DoT recognised the fundamental role of smoothly working transportation services for the success of such a large event.

|  | Relevance              | Effective-<br>ness | Efficiency     | Overall<br>Rating |
|--|------------------------|--------------------|----------------|-------------------|
| Monitoring and Evaluation:   |                        |                    |                |                   |
| M&E design at entry  | -                      | -                  | -              | 5                 |
| M&E plan implementation  | -                      | -                  | -              | 4                 |
| Overall quality of M&E   | -                      | -                  | -              | 5                 |
| UNDP and Executing Partner Performance:  | 1                      | 1                  | ſ              | F                 |
| Quality of UNDP Implementation   | -                      | -                  | -              | 4                 |
| Quality of Execution – Executing Entity  | -                      | -                  | -              | 5                 |
| Overall quality of implementation/execution  | -                      | -                  | -              | 4                 |
|  | 5                      | 5                  | 5              | 5                 |
| Outcomes:  | monte for cov          | on 2010 M/C 1/     | onuos implom   | ntod              |
| Output 1 1: Postructured public transport syste  | ements for sev         |                    | enues impleme  | <u>enteu</u>      |
| Activity 1.1.1: Restructured public transport syste  | <u>1115</u>            |                    |                |                   |
| Activity 1.1.1. Rea Vaya BRT III   | 6                      | 6                  | 6              | 6                 |
| Activity 1.1.2: IPTS in Nelson Mandela Bay   | 4                      | 3                  | 3              | 3.3               |
| Output 1.2: Road management and transport  |                        |                    |                |                   |
| system efficiency improvements: HOV lanes  | 3                      | 3                  | 4              | 3.3               |
| on the R40 in Mbombela   |                        |                    |                |                   |
| Output 1.3: NMT in three cities  |                        |                    |                |                   |
| Activity 1.3.1: Polokwane NMT  | 5                      | 4                  | 5              | 4.7               |
| Activity 1.3.2: Manguang NMT   | 5                      | 5                  | 5              | 5                 |
| Activity 1.3.3: Rustenburg NMT   | 5                      | 5                  | 5              | 5                 |
| Output 1.4: TDM projects in Cape Town  | 5                      | 5                  | 5              | 5                 |
| Outcome 2: Strengthened capacity and i   | ncreased know          | vledge to plan     | , manage and l | implement         |
| <u>sustaina</u>  | <u>ble transport c</u> | options            |                |                   |
| Output 2.1: Strengthened technical capacity fo   | er sustainable tra     | ansport            |                |                   |
| Activity 2.1.1: Academic training  | 6                      | 5                  | 5              | 5.3               |
| Activities 2.1.2 and 2.1.3: On-the-job training  | 6                      | 5                  | 5              | 5.3               |
| Output 2.2: Increased information and knowledge on sustainable transport                               |                        |                    |                |                   |
| Activity 2.2.1: Skills audit of transport sector   | 5                      | 5                  | 5              | 5                 |
| Activity 2.2.2: Information through web-<br>based portal   | 5                      | 4                  | 2              | 3.7               |
| Activities 2.2.3 to 2.2.5: Short communication strategies, workshops and guide to low carbon transport | 5                      | 5                  | 5              | 5                 |
| Overall Rating:  | 5                      | 4.7                | 4.6            | 4.7               |

| Table 12: Rat | ings for Each | Project Outcome <sup>43</sup> |
|---------------|---------------|-------------------------------|
|---------------|---------------|-------------------------------|

- 3 = MU or Moderately Unsatisfactory: There were significant shortcomings; 2 = U or Unsatisfactory: There were major shortcomings;
- 1 = HU or Highly Unsatisfactory.

<sup>&</sup>lt;sup>43</sup> 6 = HS or Highly Satisfactory: There were no shortcomings;

<sup>5 =</sup> S or Satisfactory: There were minor shortcomings,

<sup>4 =</sup> MS or Moderately Satisfactory: There were moderate shortcomings;

### 3.3.7 Sustainability of Project Outcomes

In assessing Project sustainability, we asked "how likely will the Project outcomes be sustained beyond Project termination?" Sustainability of 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 Likely (ML). This is primarily due to:

- The high levels of subsidies required to sustain operations of most of the modern transport systems being developed. While there is some relief for operational budgets from PTOF, the fund only provides 70% operational costs for the first two years of operation;
- The continued need for strengthened capacity at the city and provincial levels of government to plan, develop and implement sustainable transport projects (with the exception of the large cities such as Johannesburg and Cape Town). The level of sustainable transport knowledge is still low at these levels; this is improving, however, based on the experience they are gathering from the operation and management of the systems built for the 2010 WC;
- The substantial risks of not integrating displaced public transport service providers into a new public transport entity. Advanced negotiating skills are required to overcome complex issues of integration that require building levels of trust between the existing public transit providers and management staff of the transport entities;
- High priority placed by the Government of South Africa (GoSA) on developing public transit and the availability of capital budgets from PTSIG to continue development of sustainable transport infrastructure and systems for other cities in South Africa.

Details of sustainability ratings for SPTS are provided in Table 13.

### 3.3.8 Impacts

Despite the budgetary support provided by GEF funds through the Project to developing and providing implementation support for the sustainable transport infrastructure of seven venue cities, the impact of the Project from this perspective was minimal – with the exception of the services provided to the mini-bus taxi industry in Johannesburg on Rea Vaya BRT. The main issue was the late approval of the Project Document for SPTS and the start-up of the Project in mid-2008. By that time, many of the activities specified in the Project Document had been completed by the municipalities without any assistance from GEF.

With the commencement of the Project, the PMU, as a part of its "inception" phase, needed to contact each municipality to review the scope of activities defined in the Project

Document and modify the activities and budget as deemed appropriate. Agreements between the Project, DoT and the municipalities were made to fund activities not yet completed in late 2008. This required the PMU to check that the services to be provided by consultants engaged by the municipality complied with the activities supported in the Project Document, after which a "no-objection" letter was issued to proceed with SPTS fund disbursement for the activity.

One exception to this, however, was the advisory services provided to the mini-bus taxi industry in Johannesburg. This assistance commenced in 2009, one year prior to 2010 WC events. The complex integration of prominent mini-bus taxi operators led to the emergence of a sustainable transport champion from the informal transport sector which now holds a prominent management position in the Rea Vaya BRT, and oversees the management of a BRT depot that maintains over 400 buses for transporting up to 400,000 passengers daily.

The direct GHG emission reduction impact of the Project is estimated to be 494,766 tonnes of  $CO_2$  over a 10-year period, which exceeds the target set by the Project Document of 423,000 tonnes of  $CO_2$ . The GHG reduction was accompanied by modal shifts to public transport and walking to demonstrate lower carbon-intensive forms of urban mobility. In this regard, the impact of the Project has been positive. These GHG emission reduction estimates have been developed despite the lack of baseline studies made prior to construction of the sustainable transport facilities, and the general lack of available baseline information for many of the smaller venue cities.

### 3.3.9 Replication

The Public Transport Strategy and Action Plan (2007) selected 13 cities in South Africa for public transit improvements with funds from the PTSIG. The success of the sustainable transport development in Johannesburg has initiated a number of discussions between the City of Johannesburg and other venue cities after the 2010 WC events on replication of the Rea Vaya BRT system. This includes city officials from Nelson Mandela Bay, Polokwane, Manguang, Rustenburg and Tshwane (Pretoria).

|--|

| Actual Outcomes (as of November 2014)  | Assessment of Sustainability  | Dimensions of<br>Sustainability |
|--|---|---------------------------------|
| Actual Outcome 1:<br>Transportation improvements for seven<br>2010 WC venues implemented | <ul> <li><u>Financial Resources</u>: In the transition from non-subsidised informal transport to<br/>modern but subsidised transport systems, the Treasury and DoT have set up the<br/>PTOF, which provides 70% operational assistance to systems established with<br/>PTSIG funds for the first two years of operation; after two years, city or provincial<br/>governments are responsible for operational costs, for which most do not have<br/>sufficient budgets. For sustainable transport and logistics projects, an approved<br/>budget of USD 25 billion (SAR 262 billion) was approved in 2012<sup>44</sup>.</li> </ul> | 3                               |
|  | <ul> <li><u>Socio-Political Risks:</u> Major efforts are still required in the outreach to all displaced informal transport providers and integrating them into the new sustainable transport systems, as evidenced in NMB and Johannesburg. Failure to implement these efforts will result in a significant risk to any sustainable transport development or operation:</li> </ul>   | 3                               |
|  | <u>Institutional Framework and Governance:</u> The capacity of local governments to implement sustainable transport systems still requires strengthening in most cities of South Africa, with the exception of the large cities of Johannesburg and Cape Town. Most local governments are still challenged by the integration of local public transit service providers into a modern public transport entity.  | 3                               |
|  | <ul> <li><u>Environmental Factors:</u> The impact of the continued development of modern sustainable transport systems in South Africa will encourage travel modes with lower carbon intensities, resulting in improved environmental conditions in urban areas.</li> </ul>   | 4                               |
| Actual Outcome 2:  | <u>Overall Rating</u>   | 2                               |
| Strengthened capacity and increased  | <ul> <li><u>rmancial resources</u>. Currently, there are no budgets available for the continuation<br/>of the on-the-job training programs under SPTS;</li> </ul>   | 3                               |
| knowledge to plan, manage and  | <ul> <li><u>Socio-Political Risks</u>: None identified at this time;</li> </ul>   | 4                               |
| Implement sustainable transport options  | <ul> <li><u>Institutional Framework and Governance</u>: The DoT's information web-portal<br/>developed under the SPTS is still not operational. There is still no public access to<br/>the site;</li> </ul>   | 4                               |
|  | <ul> <li><u>Environmental Factors</u>: Increased knowledge and strengthened capacity for<br/>sustainable transport will contribute to improving the delivery of modern and<br/>environmentally beneficial sustainable urban transport systems</li> </ul>  | 4                               |
|  | Overall Rating  | 3                               |
|  | Overall Rating of Project Sustainability:   | 3                               |

<sup>&</sup>lt;sup>44</sup> <u>http://www.transport.gov.za/Portals/0/Annual%20Reports/DoT%20Strat%20plan.pdf</u>

## 4. CONCLUSIONS, RECOMMENDATIONS AND LESSONS

### 4.1 Conclusions

- Sustainable public transport is a key policy direction of the Department of Transport's Strategic Plan for 2013/14. Certain activities of the SPTS Project can be viewed as critical to the demonstration of a functional world-class transport system for South Africa that can only lead to replication of other similar projects in South Africa. The impacts of the Rea Vaya BRT, for example, are demonstrating the positive economic benefits, as was the goal of the Government in implementing this Strategic Plan. The sustained growth of these systems, however, is still constrained by a number of factors, namely:
  - The possibility of limited funds for capital works in the near future;
  - Limited capacity to plan, develop, implement, operate and maintain new sustainable transport systems in the smaller cities of South Africa; and
  - The uncertainty over sourcing operational budget shortfalls for all systems in the long term.

As such, the sustained development of transport solutions in South Africa needs to overcome issues of paying the high cost of developing modern and sustainable transport systems through its ability to reduce or eliminate subsidies into the operation of new systems. Since most of these systems are to be subsidised through municipal budgets, reduction of subsidies could be achieved through increased economic benefits, and the realisation of operational and energy efficiencies within the system as well as other municipal operating budgets.

- The commencement of SPTS only two years prior to the 2010 FIFA World Cup event had the effect of limiting the impact of this Project. The approval of the SPTS PDF-B Grant was in January 2005; however, the "loss" of 17 months from January 2005 to June 2006 contributed the late start-up date of the Project in July 2008. The Project commenced in July 2008 during an intense period of development for counterpart personnel. This constrained the ability of SPTS to function as designed, including the inability of the Project to properly establish its management systems, the lack of willingness of stakeholders to attend Technical Advisory Committee meetings (forums for venue cities to share experiences), advance capacity building efforts at the local levels, and undertake baseline surveys of transport conditions prior to the sustainable transport interventions;
- The Project, however, did have a major impact on the Rea Vaya BRT system. The advisory services provided with SPTS resources to the Johannesburg mini-bus taxi industry were a critical input into the success and sustained operation of the Rea Vaya BRT. This Project assistance should be considered a model example of donor assistance to a sustainable transport development. The success of integrating displaced and informal public transport service providers in Johannesburg provides an excellent example of the effort required to undertake complex and sensitive negotiations. The keys to the success of these negotiations appear to be early stakeholder engagement and building several layers of trust in the relationships between the negotiating parties. This resulted in the emergence of a "BRT champion" from the mini-taxi industry, resulting in a most desirable outcome. According to a number of persons familiar with the situation with the Nelson Mandela Bay IPTS, the

failure to reach an agreed settlement between the displaced mini-bus taxi association and the City is linked to a level of mistrust developed over the long, protracted negotiation process;

- An important conclusion drawn in the post-project evaluation of the Rea Vaya BRT was the positive economic impact of the system. Notwithstanding the poor transport economics of the Phase 1A of the Rea Vaya BRT, with a 48% occupancy and subsidies of higher than 50% into the system, there are a number of wide-ranging benefits of the system:
  - Safe and regulated transport to the areas served by Rea Vaya;
  - Creation of a number of higher quality jobs within the BRT company;
  - Major contribution to the GDP, and an increase in household incomes of the areas served by system;
  - Civic pride of the area.

The creation of this environment is certain to attract investment and businesses to real estate along these routes. This will result in urban densification that will increase land values and generate economic benefits. These findings are important as Johannesburg and other cities under the 2007 Public Transport Strategy and Action Plan seek validation of their projects to increase their networks of BRT and complimentary routes. One of the routes now under consideration in Johannesburg is the CBD-Sandton route, which is projected to have occupancies of over 90% as it serves to link two business hubs; as designed with high occupancies in both directions, the revenues from this route can offset some of the subsidies of the Phase 1A and 1B routes. Continued development of these corridors with quality public transit will continue to attract people to these areas, generate economic activities, and create demand for quality public transport in favour of trips by private car, thereby reducing GHG emissions.

- Aside from BRT and transport systems, the growth of park-and-ride facilities and the use of rail as an urban travel mode as piloted in Cape Town are promising. With rail infrastructure already in place, the incremental cost of park-and-ride is attractive. A constraint to further growth appears to be improvement of the passenger rail cars that is under the national Public Railway Agency for South Africa (PRASA). An improvement of the quality of these passenger cars would attract more riders and further lower the carbon intensities of urban travel in Cape Town;
- The strengthening of local and municipal government capacities is still in need, notably in the areas of sustainable transport planning and green urban development. As economic growth occurs around the modernised transport routes, the capacities of these governments will become even more strained in managing this economic growth. Moreover, the national government is encouraging local and municipal governments to seek new revenue streams to reduce subsidy payments to modern public transport systems; these levels of government, however, are unlikely to have the capacity to generate concepts for implementing actions to reduce municipal operating budgets, such as green urban development and sustainable transport, that would free up funds for public transport subsidies. An example of this would be energy efficiency or renewable energy programmes applied to municipal assets that would reduce energy costs to public buildings;

- Accompanying the need to build local and municipal government capacities is the continuation of on-the-job training programme initiated by SPTS as well as growth of the academic training for sustainable transport planning and green urban development, both of which are viewed as crucial to South Africa's ability to fully realise its vision of modernised transport systems as a means for economic growth.
- The DoT web portal for sustainable transport information dissemination has still not been open to the public at the time of writing of this report. Delays in the opening of the portal to the public are frustrating given the high level of interest in sustainable transport generated by the GoSA's programmes at this time.

### 4.2 **Recommendations**

Recommendation 1: The DoT still needs to strengthen its programmes to assist in the capacity building of provincial and municipal governments to plan, design, implement, operate and maintain sustainable transport systems in smaller cities in South Africa. This would enable these governments to become more responsive to the challenges of sustaining their new transport systems and raising funds for transport planning and further development of sustainable transport and green urban development. This would entail the design and conducting of transport surveys necessary to collect information on passenger movements in a city, such as the numbers walking, taking public transit, using private cars, as well as distances of the journeys, fuel used for urban travel and travel patterns.

**Recommendation 2: Strengthen planning of all transport projects at the local level** where capacities for transport planning and project implementation are weak. Many successful BRT and sustainable transport projects take at least 3 years of planning. Building capacities of these municipalities where transport planning capacities are weak could be in the form of additional training and upgrades to modern tools and software for simulating traffic flow conditions. This strengthened capacity will improve the effectiveness of PTSIG and PTOF funds spent on sustainable transport systems.

**Recommendation 3:** The GoSA and DoT should also assist provincial and municipal governments in responding to the challenges of sustaining their new transport systems through identification of new revenue streams related to reducing municipal operational costs and green urban development. This would entail a review of municipal expenditures to identify opportunities for reducing municipal operational costs through a holistic approach to green urban development. This may entail development of programmes for energy efficiency, renewable energy development, reducing water consumption, promotion of green construction and building materials, surface water management, green infrastructure (i.e. urban parks forests and wetlands) and waste cost reductions can augment infrastructure or operational funding for sustainable transport systems to encourage economic development and increase municipal revenue streams.

### <u>Recommendation 4: Preparation of GEF projects involving high-profile sporting</u> events need to be mindful of the project start date to ensure the impact of the GEF

**<u>project can be maximised.</u>** Projects that do not commence with sufficient advance time of the event represent a substantial risk. Most cities with these high-profile events, such as the Summer or Winter Olympics or the FIFA World Cup, undertake their preparations 4 to

6 years in advance of the scheduled events. This should be sufficient time for the preparation of a GEF project provided the officers developing the project understand the importance of having the project fully approved and under implementation at least 3 years in advance of the dates of the actual sporting event. Any delays in the start-up dates for these types of projects will only diminish the importance and profile of these projects.

### 4.3 Lessons Learned

Key lessons from the SPTS Project include:

- Project preparations associated with high-profile sporting events need to highlight the substantial risk of starting a project too late. In the case of SPTS, its start-up two years prior to the 2010 WC events did not allow the Project to be more influential in development of sustainable transport in South Africa. Fortunately, SPTS had a very competent Project Coordinator who managed to adaptively change Project activities to align with ongoing activities of the GoSA and support sustainable transport development in advance of the 2010 WC events;
- Staffing of large UNDP-implemented, GEF-financed projects with a range of activities requires a full time Project Manager or Coordinator with a strong background related to the technical discipline of the project. In the case of SPTS, the Project Coordinator had a strong background to manage such a complex project and its stakeholders, and managed to leverage his network of transport contacts to provide additional profile to sustainable transport issues and development in South Africa;
- Raising awareness of a sustainable transport measure needs to be conducted throughout the Project activity but, most importantly, during the use of the sustainable transport measure. In the case of the Mbombela HOV lane, Project awareness-raising efforts were conducted during the construction of the HOV lane. When the lane became operational, the messaging of the purpose of the HOV lane seemed to be lost.

### 4.4 Best Practices

The development of the Rea Vaya BRT demonstrates the principles of effective stakeholder engagement and ensuring those affected by a modernised transport system are integrated within the new transport system. The best practice that can be derived from this experience would be to budget adequate lead time and resources to secure the services of expertise that both the municipal government and affected public transit operators can trust. Insufficient resources and time will lead to rushed decisions, errors in judgment and the seeds of mistrust in very sensitive negotiations. The SPTS design for the Johannesburg activity of Component 1 recognised this aspect from the valuable lessons learned from the development of Transmilenio BRT and applied them to the development of the Rea Vaya BRT. In contrast, the NMB BRT component of the IPTS adopted a "big-bang" approach which only under-estimated the length and complexity of the forthcoming negotiations with the affected mini-bus and taxi associations.

## APPENDIX A – MISSION TERMS OF REFERENCE FOR TERMINAL EVALUATION

### INTRODUCTION

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 upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the full-sized project 'Sustainable Transport and Sport, a 2010 opportunity' (PIMS 3276)

The essentials of the project to be evaluated are as follows:

### **Project Summary Table**

| Title: Sustainable Transport and Sport, a 2010 opportunity |  |  |  |
|--|--|--|--|
| GEF Project ID:  | PIMS 3276  |  |  |
| UNDP Project ID:   | 00055675, Award ID 00046647  |  |  |
| Implementing Agency:                                       | United Nations Development Programme   |  |  |
| Executing Agency:  | Department of Transport  |  |  |
| ct Partners:   | City of Johannesburg, City of Cape Town, Nelson Mandela Bay Municipality, Mbombela   |  |  |
|  | Municipality, Rustenburg Municipality, Mangaung Municipality, Polokwane Municipality |  |  |
| Prodoc signature date: 26 February, 2008                   |  |  |  |
| Projected completion date                                  | e: 31 December, 2013   |  |  |
|  |  |  |  |

|   | Amou          |                |                |
|---|---------------|----------------|----------------|
| Project Outcomes and outputs  | GEF           | Co-financing   | Total (US\$)   |
| Outcome 1: Implementation of transport system improvements in seven 2010 venue cities                                     | 9,147,100     | 326,230,300    | 335,377,400    |
| Outcome 2: Strengthened capacity and increased knowledge to plan, manage and implement sustainable transportation options | 875,900       | 126,500        | 1,002,400      |
| Outcome 3: Monitoring, learning, adaptive feedback and evaluation   | 275,000       | 0              | 275,000        |
| Outcome 4: Project Management   | 675,000       | 2,136,200      | 2,811,200      |
| Total   | 10,973,000.00 | 328,493,000.00 | 339,466,000.00 |

### **Objective and Scope**

This full-size UNDP/GEF project aimed to mitigate greenhouse gas emissions through the promotion of sustainable urban passenger transportation in the venue cities of the 2010 FIFA World Cup. Thus the project also contributed to climate stabilization by reducing or avoiding CO2 emissions in the order of 423,000 tonnes of CO2 (over a 10-year period). The indirect CO2 emission reduction due to replication were estimated at 2 million tCO2 -equiv over a ten year period The project was expected to contribute to increased use of sustainable transport modes by increasing the annual number of person trips on sustainable transport modes promoted under the project by 20%.

The legacy of apartheid in South Africa, and subsequent low-cost housing policy, have resulted in a dispersed pattern of land use, with lower-income residents living far from the town centres and other employment nodes in either townships or ex-homelands. On the other hand, it created excellent urban road networks, especially to serve the wealthier suburbs. The combination of these two factors has created a powerful momentum for increasing car use by middle and higher income groups. As incomes amongst all races rise in South Africa, private car use is anticipated to likewise rise.

The South African Department of Transport (DoT) used the 2010 FIFA World Cup planning window as a catalyst for change to achieve fundamental, appropriate improvements to the South African public transport system. The project was intended to address the policy, institutional, financial, information and operational barriers to provide an effective, sustainable and environment-friendly urban public transport system, planned and regulated at local levels of government. Thus, the practical demonstration of urban transport improvement measures was showcased in the selected venue cities of the World Cup.

The total budget was estimated as US\$ 339.466 million with a GEF contribution of 10.973 million.

The project outcomes are: (1) Implementation of transport system improvements in seven 2010 venue cities (in Johannesburg, Nelson Mandela Bay, Mbombela, Polokwane, Mangaung, Rustenburg and Cape Town); (2) Strengthened capacity and increased knowledge to plan, manage and implement sustainable transportation options and (3) Monitoring, learning, adaptive feedback and evaluation.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects. The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

### Evaluation approach and method

The evaluator is expected to frame the evaluation effort using the criteria of **relevance**, **effectiveness**, **efficiency**, **sustainability**, **and impact**. A set of questions covering each of these criteria have been drafted and are included with this TOR. The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Regional Technical Adviser based in the region and key stakeholders.

The evaluator is expected to conduct a field mission, including visiting the following sites:

- Rea Vaya BRT, City of Johannesburg
- Nelson Mandela Bay Municipality
- MbombelaMuniciplaity
- Polokwane Municipality
- Mangaung Municipality
- Rustenburg Municipality
- City of Cape Town

It will be advisable for the evaluator to also meet with representatives of the following organizations, agencies and municipalities:

- The Project Executing Agency (renamed Project Implementing Agency in more recent UNDP-GEF projects), South African Department of Transport:
  - Project Director: Ms. Lusanda Madikizela, Chief Director (Acting) Programme Management, Pretoria
  - Project Coordinator: Mr David Ingham
- The Project Implementing Agency (UNDP and UNDP-GEF)

- Programme Manager: Ms Maria Mbengashe
- Regional Technical Advisor UNDP-GEF: Mr Lucas Black
- Project Beneficiaries:
  - Activity 1.1.1 Rea Vaya BRT. Executive Director Transportation, City of Johannesburg: Ms Lisa Seftel
  - Activity 1.1.2 BRT. IRPTN Project Manager, Nelson Mandela Bay: Mr Tony Arthur
  - Activity 1.2.1 HOV Lane Mbombela Municiplaity: Mr Lawrence Mabasa
  - Activity 1.3.1. Polokwane Municipality: Ms Molatelo Rapetsoa
  - Activity 1.3.2. Mangaung Municipality: Mr Willie Loftus
  - Activity 1.3.3. Rustenburg Municipality: Mr Nick Pretorius
  - Activity 1.4.1 Demand Management. Sustainable Transport Professional City of Cape Town: Ms Niki Covary
  - Activity 2.1.1 Post-graduate research studies, University of Pretoria, A-Prof Christo Venter
  - Activity 2.1.2 Professionals at National Level and 2.2.1 Skills Audit. Director Capacity development, Department of Transport: Ms Helen Mnguni
  - Activity 2.1.3 Professionals at Local Level. Director Public Transport, Department of Transport, Mr Musi Simelane.
  - Activity 2.2.2 Web Portal. Director Research Studies, Department of Transport: Mr Simon Ssekabira Ntege

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment.

### **Evaluation Criteria & Ratings**

An assessment of project performance will be carried out, based on expectations set out in the Project Logical Framework/Results Framework (see <u>Annex A</u>), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact.** The completed table must be included in the evaluation executive summary.

| Evaluation Ratings:            |        |   |        |
|--------------------------------|--------|---|--------|
| 1. Monitoring and Evaluation   | rating | 2. IA& EA Execution                           | rating |
| M&E design at entry            |        | Quality of UNDP Implementation                |        |
| M&E Plan Implementation        |        | Quality of Execution - Executing Agency       |        |
| Overall quality of M&E         |        | Overall quality of Implementation / Execution |        |
| 3. Assessment of Outcomes      | rating | 4. Sustainability                             | rating |
| Relevance                      |        | Financial resources:                          |        |
| Effectiveness                  |        | Socio-political:                              |        |
| Efficiency                     |        | Institutional framework and governance:       |        |
| Overall Project Outcome Rating |        | Environmental :                               |        |
|                                |        | Overall likelihood of sustainability:         |        |

### **Project finance / cofinance**

The Evaluation will also assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal report.

| Co-financing                        | UNDP owr | n financing | Gover   | nment  | Partner | Agency | Tot<br>(mill l | al<br>Lisé) |
|-------------------------------------|----------|-------------|---------|--------|---------|--------|----------------|-------------|
| (type/source)                       | (mm.     | 033)        | (mm.    | 033)   | (IIIII. | 0333   | (1111.)        | 033)        |
|                                     | Planned  | Actual      | Planned | Actual | Planned | Actual | Actual         | Actual      |
| Grants                              |          |             |         |        |         |        |                |             |
| Loans/Concessions                   |          |             |         |        |         |        |                |             |
| <ul> <li>In-kind support</li> </ul> |          |             |         |        |         |        |                |             |
| • Other                             |          |             |         |        |         |        |                |             |
| Totals                              |          |             |         |        |         |        |                |             |

### Mainstreaming

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programs. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

### Impact

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.<sup>33</sup>

### **Conclusions, recommendations & lessons**

The evaluation report must include a chapter providing a set of **conclusions**, **recommendations** and **lessons**.

### Implementation arrangements

The principal responsibility for managing this evaluation resides with the UNDP CO in South Africa. The UNDP CO will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. The Project Team will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

### **Evaluation timeframe**

The total duration of the evaluation will be 31working days according to the following plan:

<sup>&</sup>lt;sup>33</sup> A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: <u>ROTI Handbook 2009</u>

| Activity                | Timing  | Completion Date  |
|-------------------------|---------|------------------|
| Preparation             | 4 days  | 10 January 2014  |
| Evaluation Mission      | 15 days | 31 January2014   |
| Draft Evaluation Report | 10 days | 14 February 2014 |
| Final Report            | 2 days  | 07 March2014     |

#### **Evaluation deliverables**

The evaluation team is expected to deliver the following:

| Deliverable   | Content                                | Timing                       | Responsibilities                  |
|---------------|--|------------------------------|-----------------------------------|
| Inception     | Evaluator provides                     | No later than 2 weeks before | Evaluator submits to UNDP CO      |
| Report        | clarifications on timing<br>and method | the evaluation mission.      |                                   |
| Presentation  | Initial Findings                       | End of evaluation mission    | To project management, UNDP CO    |
| Draft Final   | Full report, (per annexed              | Within 3 weeks of the        | Sent to CO, reviewed by RTA, PCU, |
| Report        | template) with annexes                 | evaluation mission           | GEF OFPs                          |
| Final Report* | Revised report                         | Within 1 week of receiving   | Sent to CO for uploading to UNDP  |
|               |  | UNDP comments on draft       | ERC.                              |

\*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

### **Team Composition**

The evaluation team will be composed of 1 international and 1 counterpart national consultant. The international consultant will be designated the Team Leader and will be responsible for finalizing the report. The international consultant must have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The national consultant must have in-depth knowledge of Urban Transport in South Africa. The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The Team members must present the following qualifications and experience:

- Minimum 5 years of relevant professional experience;
- Knowledge of UNDP and GEF ;
- Previous experience with results-based monitoring and evaluation methodologies;
- Technical knowledge in urban transport system and infrastructure.

### **Evaluator Ethics**

Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the <u>UNEG 'Ethical Guidelines for Evaluations'</u>

### Payment modalities and specifications

| %   | Milestone   |
|-----|---|
| 10% | At contract signing   |
| 50% | Following submission and approval of the 1ST draft terminal evaluation report             |
| 40% | Following submission and approval (UNDP-CO and UNDP RTA) of the final terminal evaluation |
|     | report  |

### **Application process**

Applicants are requested to apply online (http://jobs.undp.org) by December 1st 2013. Individual consultants are invited to submit applications together with their CV for these positions. The application should contain a current and complete CV in English with indication of the e-mail and phone contact. Shortlisted candidates will be requested to submit a price offer indicating the total cost of the assignment (including daily fee, per diem and travel costs).

UNDP applies a fair and transparent selection process that will take into account the competencies/skills of the applicants as well as their financial proposals. Qualified women and members of social minorities are encouraged to apply.

## APPENDIX B – MISSION ITINERARIES (FOR AUGUST 25 – SEPTEMBER 8, 2014)

| #                        | Activity  | Stakeholder involved          | Place        |  |  |
|--------------------------|---|-------------------------------|--------------|--|--|
| Aug                      | <b>gust 14-15, 2014</b> (Thursday-Friday)   |                               |              |  |  |
| 1                        | Skype interview with Mr. David<br>Ingham  |                               |              |  |  |
| Aug                      | August 22, 2014 (Friday)  |                               |              |  |  |
|                          | Arrival of Mr Roland Wong in Pretoria   |                               |              |  |  |
| August 25, 2014 (Monday) |   |                               |              |  |  |
| 2                        | Meeting with Ms. Maria Mbengashe,<br>UNDP, and Mr. Abram Chego, DoT                                     | UNDP, DoT                     | Pretoria     |  |  |
| Aug                      | <b>gust 26, 2014</b> (Tuesday)  |                               |              |  |  |
| 3                        | Meeting with Ms. Lusanda Madikizela   | DoT                           | Pretoria     |  |  |
| Aug                      | gust 27, 2014 (Wednesday)   |                               |              |  |  |
| 4                        | Meeting with Mr. Simon Ssekabira,<br>Department of Information<br>Technology, DoT                       | DoT                           | Pretoria     |  |  |
| 5                        | Meeting with Ms. Hellen Mguni, Ms.<br>Dinah Malelea, and Ms. Lorraine<br>Strong, Capacity Building, DoT | DoT                           | Pretoria     |  |  |
| Au                       | <b>gust 28, 2014</b> (Thursday)   |                               |              |  |  |
|                          | Travel to Johannesburg  |                               |              |  |  |
| 6                        | Meeting with Ms. Lisa Seiftel, Mr.<br>Farouk Adams and Mr. Muzomuhle<br>Stanley Cebekhulu               | City of Johannesburg          | Johannesburg |  |  |
|                          | Travel on Rea Vaya BRT to Soweto<br>Depot   |                               | Johannesburg |  |  |
| 7                        | Meeting with Mr. Eric Motshwane   | Rea Vaya BRT                  | Johannesburg |  |  |
|                          | Travel back to Pretoria   |                               |              |  |  |
| August 29, 2014 (Friday) |   |                               |              |  |  |
|                          | Travel to Rustenburg  |                               |              |  |  |
| 8                        | Meeting with P.P. Mongae, Patrick<br>Maruping, M.B. Moatshe   | Rustenburg Rapid<br>Transport | Rustenburg   |  |  |
|                          | Tour of NMT facilities around Phokeng<br>Stadium  |                               | Rustenburg   |  |  |
|                          | Travel back to Pretoria   |                               |              |  |  |

| #                             | Activity  | Stakeholder involved | Place                 |  |
|-------------------------------|---|----------------------|-----------------------|--|
| August 30, 2014 (Saturday)    |   |                      |                       |  |
|                               | Travel to Cape Town   |                      |                       |  |
| Aug                           | <b>gust 31, 2014</b> (Sunday)   |                      |                       |  |
|                               | Work on report  |                      |                       |  |
| Sep                           | <b>tember 1, 2014</b> (Monday)  |                      |                       |  |
| 9                             | Meeting with Richard Gordge   | Transport Futures    | Cape Town             |  |
| Sep                           | otember 2, 2014 (Tuesday)   |                      |                       |  |
| 10                            | Meet with Ms. Niki Covary, Mr.<br>Gerhard Hitge, Mr. Sivuyile Jokazi. | City of Cape Town    | Cape Town             |  |
|                               | Tour of Cape Town park-and-ride facilities                            |                      |                       |  |
|                               | Travel to Port Elizabeth  |                      |                       |  |
| September 3, 2014 (Wednesday) |   |                      |                       |  |
| 11                            | Meeting with Mr. Tobie Pretorius                                      | Gibb Consulting      | Nelson Mandela<br>Bay |  |
|                               | Tour of IPTS for City of Nelson<br>Mandela Bay                        |                      |                       |  |
|                               | Travel to Pretoria  |                      |                       |  |
| Sep                           | otember 4, 2014 (Thursday)  |                      |                       |  |
|                               | Work on report  |                      |                       |  |
| Sep                           | otember 5, 2014 (Friday)  |                      |                       |  |
| 12                            | Debriefing meeting with Ms. Maria<br>Mbengashe                        | UNDP                 | Pretoria              |  |
| Sep                           | otember 6-7, 2014 (Saturday-Sunday)                                   |                      |                       |  |
|                               | Work on report  |                      |                       |  |
| Sep                           | ntember 8, 2014 (Monday)  |                      |                       |  |
| 13                            | Second de-briefing meeting with Walid<br>Badawi                       | UNDP                 | Pretoria              |  |
|                               | Departure of Roland Wong from<br>Johannesburg                         |                      |                       |  |

Total number of meetings conducted: 13

## **APPENDIX C – LIST OF PERSONS INTERVIEWED**

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

- 1. Mr. Walid Badawi, Country Director, UNDP South Africa;
- 2. Ms. Maria Mbengashe, UNDP South Africa;
- 3. Ms. Lusanda Madikizela, former NPD and Head, Programme Management Unit, DoT;
- 4. Mr. Abram Chego, Director, Programme Management Unit, Technnical Support Office, DoT;
- 5. Mr. David Ingham, Former Project Coordinator, SPTS;
- 6. Mr. Simon Ssekabira, Director Research Studies, DoT;
- 7. Ms. Hellen Mnguni, Senior Project Manager, Capacity Development, DoT;
- 8. Ms. Dinah Malelea, Capacity Development, DoT;
- 9. Ms. Lorraine Strong, Capacity Development, DoT;
- 10. Ms. Lisa Seftel, Executive Director, Transportation, City of Johannesburg;
- 11. Mr. Farouk Adams, Head Driver Trainer, Metro Bus, City of Johannesburg;
- 12. Mr. Muzomuhle Stanley Cebekhulu, Rea Vaya Infrastructure Manager, City of Johannesburg;
- 13. Mr. Eric Motshwane, Director of Corporate Affiars, Rea Vaya Bus Operating Company Piotrans;
- 14. P.P. Mongae, Rustenburg Rapid Transport;
- 15. Patrick Maruping, Rustenburg Rapid Transport;
- 16. M.B. Motshe, Rustenburg Rapid Transport;
- 17. Mr. Richard Gordge, Transport Futures, Cape Town;
- 18. Mr. Gerhard Hitge, Head Transport Planning & Policy Development, Department of Transport, Roads & Stormwater, City of Cape Town;
- 19. Ms. Niki Covary, Transport Planning & Policy Development, Department of Transport, Roads & Stormwater, City of Cape Town;

- 20. Mr. Sivuyile Jokazi, Transport Planning & Policy Development, Department of Transport, Roads & Stormwater, City of Cape Town;
- 21. Mr. Tobie Pretorius, Sector Unit Manager, Traffic & Transportation, Gibb Consulting, Port Elizabeth
# **APPENDIX D – LIST OF DOCUMENTS REVIEWED**

- 1. SPTS Project Document;
- 2. CEO Endorsement Document for SPTS Project;
- 3. PSC minutes;
- 4. UNDP reports including CDRs, AWPs and PIRs;
- 5. SPTS Mid term evaluation report 2011;
- 6. Department of Transport Strategic Plan 2011-2014;
- 7. City of Cape Town, 2013-2018 Comprehensive Integrated Transport Plan;
- 8. Grutter Consulting, VCS Project Document for Rea Vaya BRT, Phases 1A and 1B, Version 2, May 2011;
- Gibb Engineering and Architecture, Study on the Baseline and post-Project Monitoring and Evaluation of GEF-Assisted Integrated Public Transport System in NMB Municipality, July 2014;
- 10. Delca Systems, Baseline and Post-Project M&E of GEF-Assisted High Occupancy Vehicle Lane in Mbombela, July 2014;
- 11. Arup and Transport Futures, Baseline and Post-Project M&E of GEF-Assisted NMT Projects, March 2014;
- 12. SPTS Completion Report, December 2013

## **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                        | Notes  |
|--|--------------------------------|--|
|  | at Terminal Evaluation         |  |
| Project Title  | Sustainable Public Transport - | A 2010 Opportunity (SPTS)                                      |
| GEF ID   | 2604                           |  |
| Agency Project ID  | 3276                           |  |
| Country  | South Africa                   |  |
| Region   | AFR                            |  |
| GEF Agency   | UNDP                           |  |
| Date of Council/CEO Approval   | January 2, 2008                | Month DD, YYYY (e.g., May 12, 2010)                            |
| GEF Grant (US\$)   | 10,973,000                     |  |
| Date of submission of the tracking tool  | November 26, 2014              | Month DD, YYYY (e.g., May 12, 2010)                            |
|  |                                |  |
| Is the project consistent with the priorities identified in National Communications, | 1                              |  |
| Technology Needs Assessment, or other Enabling Activities under the UNFCCC?          | I.                             | Yes = 1, No = 0  |
| Is the project linked to carbon finance?   | 0                              | Yes = 1, No = 0  |
| Cumulative cofinancing realized (US\$)   | 328,494,000                    |  |
|  | E0.058.000                     | additional resources means beyond the cofinancing committed at |
| Cumulative additional resources mobilized (US\$)                                     | 59,958,000                     | CEO endorsement  |

| Objective 4: Transport and Urban Systems   |           |  |
|--|-----------|--|
| Please specify if the project targets any of the following areas   |           |  |
| Bus rapid transit  | 1         | Yes = 1, No = 0  |
| Other mass transit (e.g., light rail, heavy rail, water or other mass transit;   | 0         |  |
| excluding regular bus or minibus)  | 0         | 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<br>from different transportation sub-sectors) | 1         | Yes = 1, No = 0  |
| Sustainable urban initiatives  | 1         | Yes = 1, No = 0  |
|  |           |  |
| Policy and regulatory framework  | 0         | 0: not an objective/component<br>1: no policy/regulation/strategy in place<br>2: policy/regulation/strategy discussed and proposed<br>3: policy/regulation/strategy proposed but not adopted<br>4: policy/regulation/strategy adopted but not enforced<br>5: policy/regulation/strategy enforced |
| Establishment of financial facilities (e.g., credit lines, risk guarantees, revolving funds)   | 0         | 0: not an objective/component<br>1: no facility in place<br>2: facilities discussed and proposed<br>3: facilities proposed but not operationalized/funded<br>4: facilities operationalized/funded but have no demand<br>5: facilities operationalized/funded and have sufficient demand          |
| Capacity building  | 4         | 0: not an objective/component<br>1: no capacity built<br>2: information disseminated/awareness raised<br>3: training delivered<br>4: institutional/human capacity strengthened<br>5: institutional/human capacity utilized and sustained   |
|  |           |  |
| Length of public rapid transit (PRT)   | 69        | km   |
| Length of non-motorized transport (NMT)  | 22        | km   |
| Number of lower GHG emission vehicles  | 420       |  |
| Number of people benefiting from the improved transport and urban systems  | 216,340   | per day  |
|  |           |  |
| Litetime direct GHG emissions avoided  | 494,766   | tonnes COZeq (see Special Notes above)   |
| Lifetime direct post-project GHG emissions avoided   | 387,794   | tonnes CO2eq (see Special Notes above)   |
| Lifetime indirect GHG emissions avoided (bottom-up)  | 1,686,500 | tonnes CO2eq (see Special Notes above)   |
| Lifetime indirect GHG emissions avoided (top-down)   |           | tonnes CO2eq (see Special Notes above)   |

| APP | ENDIX F – LOO | GICAL FRAME | WORK MATRIX | (FROM MAY 2 | 013) |
|-----|---------------|-------------|-------------|-------------|------|
|     |               |             |             |             |      |

| (Objectives, outcomes,<br>outputs)   | Indicator Description  | Baseline  | Final Value   | Sources of verification   | Assumptions/risks  |
|--|--|---|---|---|--|
| <b>GOAL</b><br>To reduce greenhouse<br>gases (GHG) from urban<br>transportation in South<br>African cities through the<br>promotion of a long-term<br>modal shift to more efficient<br>and less polluting forms of<br>transport  | Reduction in GHG<br>emissions associated with<br>modal shifts and higher<br>transport system efficiency<br>Improvement of air quality<br>(despite economic and traffic<br>growth) as measured by<br>levels of PM, SOx, NOx, and<br>CO in the corridors<br>Decrease in ambient noise<br>levels in the corridors | The baseline of CO <sub>2</sub><br>emissions avoided in 2004-<br>2008 will be established<br>during the baseline survey<br>at onset of the project.<br>Will be established during<br>the baseline survey at onset<br>of the project<br>Will be established during<br>the baseline survey at onset<br>of the project | Direct reduction of 423,000<br>tonnes of GHG emissions<br>over a 10 year lifespan<br>Improvement of 30% at end<br>of project survey.<br>Improvement of 25% at end<br>of project survey  | <ul> <li>Transport plans and<br/>reports</li> <li>Completion reports of<br/>the BRT, HOV lane and<br/>NMT subprojects</li> <li>Project progress,<br/>baseline surveys, end of<br/>project surveys,<br/>monitoring and<br/>evaluation reports</li> </ul>   | <ul> <li>Long-term commitment<br/>of the Government to<br/>promoting reductions in<br/>GHG emissions related<br/>to transport beyond the<br/>2010 World Cup</li> </ul>   |
| <b>OBJECTIVE</b><br>The promotion of a safe,<br>reliable, efficient, co-<br>ordinated and integrated<br>urban passenger system in<br>South Africa, managed in an<br>accountable way, to ensure<br>that people experience<br>improving levels of mobility<br>and accessibility. | Transport Systems<br>improving modal shift,<br>efficiency and mobility for<br>the selected interventions<br>Public perception of public<br>transport in the selected<br>corridors<br>Number of person-trips /<br>annum on sustainable<br>transport options   | <ul> <li>Will be established during<br/>the baseline survey at onset<br/>of the project.</li> <li>Baseline will be established<br/>during the baseline survey<br/>at onset of the project.</li> <li>Baseline will be established<br/>during the baseline survey<br/>at onset of the project</li> </ul>              | In targeted corridors<br>increased as established<br>during baseline survey and<br>measured during end of<br>project survey.<br>Public perception of public<br>transport in the selected<br>corridors is improved by<br>50% at end of project<br>survey.<br>Person trips on sustainable<br>modes increased by 20% | <ul> <li>Completion and progress<br/>reports of the proposed<br/>BRT, HOV lane and<br/>NMT projects</li> <li>Project progress and<br/>evaluation reports,<br/>baseline surveys, end of<br/>project surveys,</li> <li>Public opinion surveys</li> <li>Surveys in corridors<br/>improved under the<br/>project</li> </ul> | <ul> <li>Private sector<br/>interested in<br/>participating in<br/>sustainable transport<br/>improvement projects;<br/>acceptance by existing<br/>operators of BRT<br/>systems and HOV<br/>lanes</li> <li>Public acceptance of<br/>(improved) public<br/>transportation and NMT</li> </ul> |
| OUTCOME 1<br>Implementation of transport<br>system improvements in<br>seven 2010 venue cities  | Status of infrastructure<br>planning & operations for<br>2010 in the selected venue<br>cities  | Public transport in the<br>selected venue cities is<br>characterised by: the large<br>modal share of minibus<br>taxis; no integrated fare<br>and ticketing system<br>between minibus, bus and   | The first phases of the<br>proposed BRT/corridor<br>systems in Jo'burg and<br>Nelson Mandela Bay, HOV<br>lanes in Mbombela and the<br>NMT infrastructure in<br>Mangaung, Polokwane &  | <ul> <li>Traffic and on-board<br/>surveys; ticket sales;<br/>surveys amongst NMT<br/>users</li> <li>Project progress and<br/>evaluation reports</li> <li>Operational, business</li> </ul>   | <ul> <li>The commercial<br/>feasibility of the<br/>proposed BRT services<br/>is high enough to<br/>attract existing minibus<br/>and bus operators and<br/>other private investors</li> </ul>   |

| PROJECT STRATEGY<br>(Objectives, outcomes,<br>outputs)  | Indicator Description   | Baseline   | Final Value  | Sources of verification   | Assumptions/risks  |
|---|---|--|--|---|--|
|   | Number of public transport<br>users along selected<br>interventions<br>Public perception of public<br>transport and NMT amongst<br>the public   | rail services; no coordinated<br>feeder services into the<br>main trunk services<br>Will be established during<br>baseline survey<br>Poor public perception of<br>public transport and NMT<br>amongst the public, that will<br>be quantified in the baseline<br>survey | Rustenburg have been<br>constructed and are<br>operational by the time of<br>the 2010 World Cup events<br>Increased share of public<br>transport users/ amount of<br>passengers, drivers and/or<br>travellers using the new<br>BRT, HOV lane and NMT<br>facilities, to be measured at<br>end of project survey<br>Improved perception of the<br>public (30% compared to<br>baseline) | <ul> <li>and financing plans as<br/>well as detailed designs<br/>of the proposed transport<br/>improvement projects</li> <li>Photographic evidence<br/>of a running system</li> <li>Baseline and post<br/>project surveys</li> </ul>  | <ul> <li>Confirmed commitment<br/>of key stakeholders</li> <li>Financing from PTIF<br/>and other sources is<br/>secured for the design<br/>and construction of the<br/>proposed projects</li> <li>Interest of general<br/>public in (improved)<br/>public transportation<br/>and NMT</li> <li>Political willingness and<br/>legal feasibility</li> </ul>   |
| 1.1 Restructured public<br>transport system<br>(high-impact modal<br>shift projects): BRT<br>systems (Rea Vaya<br>Johannesburg and<br>Khulani Corridor N.<br>Mandela Bay) | Compliance with the<br>construction schedule (by<br>2010) of 94 km of BRT in<br>Johannesburg, of the<br>Khulani Corridor BRT in<br>Nelson Mandela Bay<br>Financial sustainability:<br>Public Transport subsidy<br>payments to operators for<br>services in the corridor<br>Social equity: Number of<br>low-income households<br>within 500m of the improved<br>transport system and fare<br>per km of the transport<br>system | Not ready<br>Current subsidy situation,<br>Will be established in<br>baseline survey<br>Will be established in<br>baseline survey  | Ready and documented<br>Will be measured in end of<br>project survey<br>Will be established in<br>baseline survey  | <ul> <li>BRT operational plans</li> <li>BRT business plans</li> <li>Marketing and<br/>awareness creation plan</li> <li>Detailed infrastructure<br/>design of the<br/>BRT/corridor systems</li> <li>Minutes of meeting with<br/>existing operators</li> <li>Photographic evidence of<br/>a running system</li> <li>Concession contracts;<br/>local bus companies<br/>operating in BRT system</li> <li>Municipal reports</li> <li>Registry of ticket sales<br/>and on-board surveys;<br/>opinion polls</li> <li>Project progress and<br/>evaluation reports</li> <li>Baseline and end of</li> </ul> | <ul> <li>A sound business plan<br/>for partnership between<br/>local government,<br/>private sector, existing<br/>operators and<br/>labourers can be<br/>developed</li> <li>Financing from PTIF<br/>and other sources is<br/>secured for the design<br/>and construction of the<br/>proposed projects (e.g.<br/>Johannesburg:<br/>currently ZAR 600<br/>million of the needed<br/>ZAR 2 billion has been<br/>secured)</li> <li>Financing for new bus<br/>vehicles is in place and<br/>the existing minibus<br/>sector will participate in</li> </ul> |

| Indicator Description   | Baseline   | Final Value   | Sources of verification  | Assumptions/risks  |
|---|--|---|--|--|
|   |  |   | project surveys  | <ul> <li>the project</li> <li>Acceptance of BRT<br/>systems and tariffs by<br/>commuters</li> <li>Political willingness and<br/>legal feasibility;<br/>environmental<br/>clearance are given in<br/>time</li> <li>Regulations for<br/>tendering of<br/>construction and<br/>subsequent operations<br/>are in place</li> <li>The BRT system can<br/>function on a no-<br/>subsidy basis</li> <li>Some indicators will be<br/>measured after only 3-<br/>4 months of operation<br/>and might not reflect<br/>final mode shift<br/>potential or final<br/>profitability or financial<br/>sustainability</li> </ul>  |
| Compliance with the<br>construction schedule (by<br>2010) of 9 km of HOV lanes<br>in Mbombela<br>Financial sustainability:<br>Public Transport subsidy<br>payments to operators for<br>services in the corridor<br>Social equity: Number of<br>low-income households<br>within 500m of the improved | Not ready<br>Current subsidy situation,<br>Will be established in<br>baseline survey<br>Will be established in<br>baseline survey  | Ready and documented<br>To be measured in end of<br>project survey<br>To be measured in end of<br>project survey  | <ul> <li>Operational plan and<br/>detailed engineering and<br/>design of the HOV lanes</li> <li>Marketing and<br/>awareness creation plan</li> <li>Minutes of stakeholder<br/>consultations</li> <li>Traffic surveys</li> <li>Opinion polls</li> <li>Project progress and<br/>evaluation reports</li> </ul>  | <ul> <li>Confirmed commitment<br/>of all stakeholders</li> <li>Financing from PTIF<br/>and other sources is<br/>secured for the design<br/>and construction of the<br/>proposed projects</li> <li>Good law enforcement<br/>regarding the use of<br/>HOV lanes by buses<br/>and multi-passenger<br/>vehicles</li> <li>Political willingness and</li> </ul>  |
| Co<br>20<br>in<br>Fir<br>Pu<br>So<br>lov<br>wit   | Impliance with the<br>nstruction schedule (by<br>10) of 9 km of HOV lanes<br>Mbombela<br>nancial sustainability:<br>Iblic Transport subsidy<br>yments to operators for<br>rvices in the corridor<br>cial equity: Number of<br>v-income households<br>thin 500m of the improved<br>nsport system and fare | Impliance with the<br>nstruction schedule (by<br>10) of 9 km of HOV lanes<br>MbombelaNot readynancial sustainability:<br>ublic Transport subsidy<br>yments to operators for<br>rvices in the corridorCurrent subsidy situation,<br>Will be established in<br>baseline surveycial equity: Number of<br>v-income households<br>thin 500m of the improved<br>nsport system and fareWill be established in<br>baseline survey | Impliance with the<br>nstruction schedule (by<br>10) of 9 km of HOV lanes<br>MbombelaNot readyReady and documentednancial sustainability:<br>ublic Transport subsidy<br>yments to operators for<br>rvices in the corridorCurrent subsidy situation,<br>Will be established in<br>baseline surveyTo be measured in end of<br>project surveycial equity: Number of<br>v-income households<br>hin 500m of the improved<br>nsport system and fareWill be established in<br>baseline surveyTo be measured in end of<br>project survey | Impliance with the<br>nstruction schedule (by<br>10) of 9 km of HOV lanesNot readyReady and documented• Operational plan and<br>detailed engineering and<br>design of the HOV lanesMbombela<br>nancial sustainability:<br>ublic Transport subsidy<br>yments to operators for<br>rvices in the corridorCurrent subsidy situation,<br>Will be established in<br>baseline surveyTo be measured in end of<br>project survey• Marketing and<br>awareness creation planCurrent subsidy<br>yments to operators for<br>rvices in the corridorCurrent subsidy situation,<br>Will be established in<br>baseline surveyTo be measured in end of<br>project survey• Minutes of<br>surveyCurrent subsidy<br>yments to operators for<br>rvices in the corridorWill be established in<br>baseline surveyTo be measured in end of<br>project survey• Opinion polls<br>• Project progress and<br>evaluation reportsCurrent subsidy<br>yments to operators for<br>rvices in the corridorWill be established in<br>baseline surveyTo be measured in end of<br>project survey• Opinion polls<br>• Project progress and<br>evaluation reports |

| PROJECT STRATEGY<br>(Objectives, outcomes,<br>outputs)                              | Indicator Description  | Baseline   | Final Value   | Sources of verification  | Assumptions/risks  |
|---|--|--|---|--|--|
|   | per km of the transport<br>system  |  |   |  | <ul> <li>Regulations are in place</li> <li>Some indicators will be measured after only 3-4 months of operation and might not reflect final mode shift potential or final profitability or financial sustainability</li> </ul>  |
| 1.3 Non-motorised transport<br>(NMT) in Polokwane,<br>Mangaung and<br>Rustenburg    | Compliance with the<br>construction schedule of<br>cycle paths and walkways<br>(by 2010) of 55.5 km in<br>Polokwane, 3.8 km in<br>Mangaung and 10kmin<br>Rustenburg<br>Social equity: Number of<br>low-income households<br>within 500m of the improved<br>transport system and fare<br>per km of the transport<br>system<br>Integrated transport and<br>development plans | Not ready<br>Will be established in<br>baseline survey<br>Integrated transport and<br>development plans not<br>completed | Ready and documented<br>Will be measured in end of<br>project survey<br>Integrated transport and<br>development plans are in<br>place in all 3 venue cities | <ul> <li>Operational plan and<br/>detailed engineering and<br/>design of the bikeways<br/>and walkways</li> <li>Marketing and<br/>awareness creation plan</li> <li>Minutes of stakeholder<br/>consultations</li> <li>Surveys among<br/>pedestrians and cyclists</li> <li>Project progress and<br/>evaluation reports</li> <li>Transport plans and<br/>reports</li> </ul> | <ul> <li>Continuing support of stakeholders (including pedestrians and cyclists)</li> <li>Financing from PTIF and other sources is secured for the design and construction of the proposed projects</li> <li>Acceptance and public awareness regarding cycling and walking as a transportation option</li> <li>Political willingness and legal feasibility</li> <li>Good cooperation between levels of government (national, provincial, local) and within layers of government for integrated transport and land-use policies and planning</li> </ul> |
| OUTCOME 2<br>Increased capacity and<br>strengthened local<br>institutions (to plan, | Level of individual and<br>institutional Capacity and<br>Knowledge on sustainable<br>transportation  | The level of capacity and<br>knowledge of the key<br>stakeholders, in particular<br>local government and                 | Increased capacity is<br>proven through:<br>Adoption of integrated<br>transport plan in the four  | <ul> <li>Interviews/questionnaires<br/>and/or survey among<br/>workshop participants<br/>and trained professionals</li> </ul>  | <ul> <li>Professionals and<br/>working staff are willing<br/>to be trained and<br/>attend sustainable</li> </ul>   |

| PROJECT STRATEGY<br>(Objectives, outcomes,<br>outputs)  | Indicator Description  | Baseline   | Final Value  | Sources of verification  | Assumptions/risks  |
|---|--|--|--|--|--|
| manage and implement<br>sustainable transportation<br>options)  |  | transport operators,<br>regarding the design and<br>implementation of<br>sustainable transport<br>options is still low | <ul> <li>small venue cities that focus on sustainable transportation options</li> <li>Key professionals from all the venue cities in different areas have acquired knowledge on different aspects of sustainable transportation through training, workshops and seminars and a webbased information and knowledge tool</li> <li>30 people have 1) obtained a degree in transport planning, or 2) finished research theme or 3) done internship programme in one of the venue cities</li> </ul> | Project progress and<br>evaluation reports   | transportation<br>workshops<br>(Local) government<br>commitment to<br>coordinate land-use,<br>traffic and transport<br>dimensions of planning  |
| 2.1 Increased number of<br>post-graduate<br>professionals working<br>in the area of<br>transport planning | Number of professionals<br>with a post-graduate<br>education in transport<br>planning and engineering<br>through the project | Lack of professionals with a<br>post-graduate education in<br>transport planning and<br>engineering                    | At least 30 people have 1)<br>obtained a degree in<br>transport planning, or 2)<br>finished research theme or<br>3) done internship<br>programme in one of the<br>venue cities   | <ul> <li>Interviews with students, researchers, interns, mentors</li> <li>Mid-term and final evaluation reports</li> <li>Progress reports and evaluations</li> </ul> | <ul> <li>Motivation of<br/>undergraduate<br/>professionals to follow<br/>a post-graduate course<br/>part-time together with<br/>their daily work</li> <li>Municipal managers<br/>allow their transport-<br/>related staff to follow a<br/>post-graduate study on<br/>transportation</li> <li>Municipalities are<br/>willing to use interns<br/>and provide a<br/>mentoring role</li> </ul> |
| 2.2 Increased information<br>and knowledge about<br>sustainable<br>transportation                         | Number of<br>Workshops /<br>experience<br>sharing platforms  | Limited awareness and<br>information sharing to<br>effectively adopt sustainable<br>transport options:                 | 16 workshops are organised<br>on planning, design and<br>implementation of<br>sustainable transportation   | <ul> <li>Project progress and<br/>evaluation report</li> <li>The knowledge resource<br/>and learning tool itself</li> </ul>  | <ul> <li>Professionals and<br/>working staff is willing<br/>to attend the<br/>sustainable</li> </ul>   |

| PROJECT STRATEGY<br>(Objectives, outcomes,<br>outputs)                                       | Indicator Description                | Baseline  | Final Value  | Sources of verification   | Assumptions/risks   |
|--|--------------------------------------|---|--|---|---|
| options, including<br>web-based<br>knowledge resource<br>and learning tool is<br>operational |                                      | Workshops or seminars are<br>not organized in a<br>systematic way, covering all<br>sustainable transportation<br>issues and options | systems and transport<br>planning for mega-sporting<br>events in which international<br>experts will provide<br>information and training to<br>all the venue cities; Each<br>workshop is accompanied<br>by visits by international<br>experts to at the least the<br>four small venue cities | <ul> <li>Survey amongst users<br/>(user friendliness,<br/>amount and type of<br/>information, captured<br/>successful<br/>methodologies)<br/>Questionnaire for users<br/>of the web-based tool</li> </ul> | <ul> <li>transportation<br/>workshops</li> <li>DoT or another<br/>institution is willing to<br/>host and maintain the<br/>website, also after<br/>2010</li> </ul> |
|  | Web-based knowledge<br>resource tool | No orderly computerised<br>structure exists in which<br>knowledge can be<br>categorised and stored                                  | Functional web-based<br>knowledge resource and tool<br>maintained by host<br>organisation with 1,000 hits<br>on the web-site / annum   |   |   |

### 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<sup>46</sup>

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

Name of Consultant: <u>Roland Wong</u>

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 December 16, 2014

Colee Signature:

<sup>&</sup>lt;sup>46</sup>www.unevaluation.org/unegcodeofconduct