1. Project Data

GEF Project ID	1081
IA/EA Project ID	P074021
Focal Area	Climate Change
Project Name	Peru Lima Transport Project
Country/Countries	Peru
Geographic Scope	National
Lead IA/Other IA for joint projects	World Bank
Executing Agencies involved	The National Environment Fund (FONAM); Protransporte (a decentralized public entity of the Metropolitan Municipality of Lima); Special Metropolitan Project for NMT (PEMTNM)
Involvement of NGO and CBO	Not involved
Involvement of Private Sector	Yes - Primary component
Operational Program or Strategic Priorities/Objectives	OP 11: Promoting Environmentally Sustainable Transport
TER Prepared by	Joshua Schneck
TER Peer Review by	Neeraj Negi
Author of TE	Oswaldo Patino & Elisabeth Goller
Review Completion Date	
CEO Endorsement/Approval Date	10/30/2003
Project Implementation Start Date	8/31/2004
Expected Date of Project Completion (at start of implementation)	6/30/2009
Actual Date of Project Completion	6/30/2010
TE Completion Date	3/27/2012
IA Review Date	Not Reviewed
TE Submission Date	10/11/2012

2. Project Financing

Financing Source	At Endorsement (millions USD)	At Completion (millions USD)
GEF Project Preparation Grant		
Co-financing for Project Preparation		
Total Project Prep Financing	-	-
GEF Financing	7.93	7.35
IA/EA own	45.00	45.00
Government	44.40	171.90
Other*	45.00	45.00
Total Project Financing	142.33	269.25
Total Financing including Prep	142.33	269.25

*Includes contributions mobilized for the project from other multilateral agencies, bilateral development, cooperation agencies, NGOs, the private sector, and beneficiaries.

3. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF Evaluation Office TE Review
Project Outcomes	MS	MS	Not Reviewed	MU
Sustainability of Outcomes	N/A	MS	Not Reviewed	MS
Monitoring and Evaluation	S	S	Not Reviewed	S
Quality of Implementation and Execution	N/A	MS	Not Reviewed	MS
Quality of the Evaluation Report	N/A	N/A	Not Reviewed	S

4. Project Objectives

4.1. *Global Environmental Objectives of the project:*

According to the Project Document submitted for CEO endorsement (ProDoc), the Global Environmental Objective of the project is to "help to facilitate GHG reductions from ground transport in the Lima-Callao Metropolitan Area by contributing to the promotion of a long-term modal shift toward more efficient and less polluting forms of transport, such as Non-Motorized Transport and high-capacity public transport vehicles."

No changes in the Global Environmental Objectives of the project were noted in the terminal evaluation or final PIR.

4.2. *Development Objectives of the project:*

The project consisted of two principle operations: establishment of an efficient, reliable, cleaner, and safer mass rapid transit system (a segregated high-capacity bus line) financed by a loan from the World Bank and Inter-American Development Bank; and expansion and promotion of non-motorized transit infrastructure, institutional capacity building around sustainable transport, and environmental monitoring, supported by a grant from the GEF. Both operations shared the same project documents and were well integrated. This TER focuses principally on the parts of the project that were financed by the GEF grant, but also covers co-financed outputs that were integral to GEF-financed objectives.

The ProDoc states the following development objective for the project: "to assist the Municipality of Metropolitan Lima (MML) in enhancing the economic productivity and the quality of life within the Lima Metropolitan area through improving mobility and accessibility for the metropolitan population, especially in the peri-urban poor neighborhoods by establishing an efficient, reliable, cleaner and safer mass rapid transit system."

The ProDoc further defines four development objectives that are financed by the GEF grant:

(1) rationalization of public transport capacity by providing financial incentives to retire old buses;

(2) rehabilitation and expansion of the existing bikeway network in Lima and Callao and promotion of bike use;

(3) delivery of an institutional strengthening program on sustainable transport, targeting municipalities and institutions dealing with environmental issues and/or transport planning; and

(4) to assess and monitor the GEF project global consequences.

Project objectives financed by the WB and IADB loan are (i) rehabilitation and improvement of existing road infrastructure, (ii) traffic management measures to enhance transport and environmental conditions including road safety improvements, transport emissions reductions and better access for vulnerable road users, and (iii) institutional measures to strengthen the Municipality of Lima's planning, regulator, administrative, and operational capacity in urban transport in the medium and the long term. Successful execution of project objectives are expected to lead to reductions in both greenhouse gases as well as reductions in the emissions of other pollutants harmful on a regional level, and which include particulate matter, SOx, CO, and NOx.

The project was restructured in 2009 whereby bus-scrapping-related activities were replaced with a study to identify additional Bus Rapid Transit corridors for Lima, prepare the preliminary designs for a second East-West corridor, and advance the integration of the system. Restructuring was necessary as Protransporte, one of the Peruvian implementing agencies, devised a new modality to finance implementation of the bus-scrapping program which made the GEF funding redundant. Despite the replacement of the bus-scrapping activities the scrapping related indicators were maintained under the Project, and two new indicators were added to assess activities related to the new GEF-financed study.

No other changes in the Development Objectives were noted in the Terminal Evaluation or final PIR.

4.3. *Changes in the Global Environmental Objectives, Development Objectives, or other activities:*

Criteria	Change?	Reason for Change
Global Environmental Objectives	No	
Development Objectives	No	
Project Components	Yes	Exogenous conditions changed, necessitating a change in project components as one of the project activities was no longer additional
Other activities	No	

5. GEF EO Assessment of Outcomes and Sustainability

5.1. *Relevance* – **Satisfactory**.

Project outcomes focused on improving the efficiency, reliability, and utilization of public transportation in the Lima Metropolitan Area - home to over nine million inhabitants and hitherto serviced by an inefficient, unsafe and highly-polluting transit system - and on enhancing and promoting the use of non-motorized transportation options. Therefore it is highly relevant to Operational Program 11 of the GEF - Promoting Environmentally sustainable Transport - as well run public transportation systems and non-motorized transport promise reduced GHG emissions, reduced emissions of local pollutants, and increased system-wide mobility. Project

outcomes are also relevant to both local and national-level priorities. As noted in the Terminal Evaluation (TE, pg 16-17):

- the project design is in-line with the 2006 Municipal Policy Guidelines for Public Transport in the Lima Metropolitan Area;
- the promotion of bicycle use as a transport option is explicitly envisioned in Peru's Strategic Plan for Bicycle Transport and the new national bicycle law; and
- the new president of Peru, in his inaugural speech in 2011, stated that the government will support the development of urban transport activities in Lima.

5.2. *Effectiveness* – **Moderately Unsatisfactory**

According to the TE, the project was largely successful in meeting the project's development objectives, while attainment of GEF-supported outcomes was moderately less than that envisioned in the ProDoc. At the same time, TE states that all targets unmet at the time of the TE are likely to be achieved in the short-term.

GEF supported project achievements and shortfalls include:

- 66 percent of targeted GHG reductions were realized through the establishment of a new 28.6-km rapid bus transit corridor in Lima, partial decommissioning of old buses (see below), and an associated 12 percent modal shift from cars and taxis to buses. New buses run on cleaner, compressed natural gas.
- the GEF-financed study on integrating public transport in Lima has "helped lay the foundations for potential future modal shifts to public transport" (TE, pg 20), which would lead to additional GHG reductions.
- Retirement of old buses was partially achieved with 16 buses retired at the time of the TE, compared against a target of 250. However, bus scrapping activities only started in January 2012, and TE expects Protransporte to fully meet retirement targets in the short-term (TE, pg 21).
- Rehabilitation and expansion of the existing bikeway network in Lima and Callao and promotion of bicycle use were fully achieved in terms of their respective output indicators. This included rehabilitation of 33.2 km of bikeways, extension of 6.45 km of bikeways connecting San Marco and Catolica Universities, and construction of 19.35 km of new bikeways. However, bicycle trips increased by only 4% - far short of the doubling sought in the ProDoc. The reasons given in the TE include the late completion of most new bikeways with little time to promote their use; major construction on most bikeways throughout the project; and weakness in the targeting of the promotion campaign.
- An institutional strengthening program on sustainable transport, targeting municipalities and institutions that deal with environmental issues and/or transport planning was successfully delivered. At the time of the TE, there were positive indications that this is contributing to the development of a long-term modal shift towards more sustainable transport (TE, pg 22).

- Improved capacity and provision of environmental monitoring of the project's global consequences was established, including an assessment of the GHG impact of bicycle activities; a GHG inventory for mobile sources in Metropolitan Lima; and the evaluation of the GHG emission impact of the second Bus Rapid Transport corridor. Protransporte assessed the GHG impact of the first BRT corridor and reductions from bus scrapping.

The project suffered from some delays and restructuring which impacted the ability of the project to fully deliver expected outcomes by the project's close. In particular, the major output of bus scraping was not achieved by project end, and GHG gains anticipated from bicycle promotion are far below the expected targets. While the project has made significant achievements in advancing sustainable transport options and use in Lima, and appears to have set the stage for future shifts towards sustainable transport, achievement of GEF-funded objectives is currently speculative. The project is therefore rated as Moderately Unsatisfactory.

5.3. *Efficiency* – **Moderately Unsatisfactory.**

Project efficiency can be assessed by comparing ex ante estimations of GHG reductions from implementing the GEF-supported activities - found in the ProDoc - with realized project outcomes and near-term expected outcomes. The bulk of the GHG reductions envisioned in the ProDoc were to come as a result of bus-scrapping activities. As noted above, these activities were made redundant when Protransporte developed a system whereby bus concessionaires would be contractually required to scrap old busses. The concessionaires established a trust fund in the amount of $6,164,770 that is currently managed by Protransporte, and the TE fully expects the targeted number of buses (250) to be realized in the short-term, leading to the expected GHG reductions. Actual realized GHG emissions would be 33,000-43,000 GHG tons/year - as much as double the amount expected. No further information is provided in the TE or PIR as to why the amount of ex post reductions is larger than the ex ante estimations. However, all of this is speculative at the time of the project's close. While the GEF project did not finance any scrapping-related activities, as envisioned in the ProDoc, the scrapping indicators were maintained in the restructuring, and the project team supported Protransporte in a number of scrapping-related preparatory activities (TE, pg 24).

Funding for bus scraping was instead allocated to a study to identify additional Bus Rapid Transit corridors for Lima, prepare the preliminary designs for a second East-West corridor, and advance the integration for the system. If implemented, GHG reductions would be on the order of 150,000 CO2 eq tons/year. The financial contribution of this project relative to the investments needed is small, however, the project could be considered an initial trigger.

No direct link is provided between the institutional strengthening components and M&E activities, and GHG reductions. However, the TE notes a number of positive signs that the project has indeed contributed to advancing a modal shift towards more sustainable transportation in Lima and Peru. Noted signs are (TE, pg 22):

- an increasing number of municipalities are implementing their own bicycle-infrastructure and traffic-calming measures;
- increased spending to improve public transport;
- increased participation of municipalities in the Competition for Good Administrative Practices, under the category of "Sustainable Transport";
- the National Government's legal initiative to convert diesel vehicles to compressed natural gas.

The least successful component of the project to-date, in terms of realized emission reductions is the bicycle component. According to ex post analysis, reductions of only 22 tons of GHG/year have been achieved to date, compared with an expected 879 tons/year. Project delays, sub-optimal targeting of the bicycle promotion campaign, coupled with exogenous factors including construction along the bikeway paths for much of the project are to blame. There is also the assessment, foreseen in the ProDoc, that the shift to bicycling has many cultural factors to overcome, and these will take a longer period of time to achieve. In light of all the above considerations the project is rated as Moderately Unsuccessful in terms of efficiency.

5.4. *Sustainability* – **Low/Moderate Risks.**

Risks to GEF-supported outcomes are moderate. Although GEF-funding did not directly finance the development of the bus rapid transport line (BRT), many of the GEF-supported activities and desired outcomes (including retirement of old inefficient buses, further expansion of the BRT network, transition to more sustainable transport models, and ultimately GHG reductions) for this project depend upon the successful establishment and operation of the first BRT line in Lima (see TE, pg 157). The BRT line is fully operational and is currently one of the most utilized lines in Latin America (TE, pg 26). As noted in the TE, there is a strong commitment on the part of the municipal administration to maintain and expand the system.

The GEF-funded study that identified and laid the groundwork for a second BRT line in Lima faces moderate risks in terms of whether or not such a line will be established. While TE notes a desire on the part of the MML to expand the bus way system, it is not yet clear whether the line proposed by the GEF study will be served by bus or train. If a train line is built, the study will have been less relevant, but still a valuable input to the process (TE, pg 27).

Risks to the bus scrapping activities are considered low. As noted above, a trust fund has been established and is managed by Protransporte. A draft municipal order, expected to be approved in February 2012, will ensure that envisioned vehicle scrapping is achieved, and possibly exceeded in number.

The shift to bicycle riding in Lima and Callao is more uncertain. As the ProDoc anticipates, significant uptake of bicycling as a viable transport option in Peru is likely to be a long-term undertaking, as it requires a cultural shift in prevailing attitudes. A the close of the GEF project in

2010, the MML not only maintained the project entity responsible for bikeways and bike promotion in Lima, PEMTNM, it strengthened it (TE, pg 27). In addition, a new national bicycle law has created a legal requirement for municipalities to promote bicycle use. As assessed in the TE, the target GHG emissions envisioned in the ProDoc, which are short-term and conservative, are likely to be achieved in the short term. Bicycle promotion activities in Callao were discontinued however and expected reductions in Callao may not be fully achieved. TE states that the commitment among the MMT to maintain the existing bikeways is strong.

In light of the above considerations, the risks to sustainability for project outcomes is low-moderate.

6. Processes and factors affecting attainment of project outcomes

6.1. *Co-financing*

6.1.1. To what extent was the reported co-financing essential to the achievement of GEF objectives? Were components supported by co-financing well integrated into the project?

Project co-financing was essential to the achievement of GEF objectives, as co-financing covered the costs of the BRT infrastructure, as well as some of the bikeway infrastructure. It should be noted that the co-financing was associated most directly with the World Bank and IADB financed portions of the project, which included BRT infrastructure. Co-financing for the GEF portions of the project included funds mobilized by the private sector by Protransporte's decision to take over the bus scraping program and create a legal requirement among concessionairs to contribute; funding for part of the bikeways; and funds for the monitoring of GHG impacts of the first BRT line.

6.1.2. If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If it did, then in what ways and through what causal linkages?

There was a substantial increase in the amount of realized co-financing. MML raised its contribution from $44.4 million to $171.9 million, which guaranteed that the project outputs were delivered (establishment and sucessful operation of the BRT line). The increased cost of the project, and the commensurate increase in co-financing raised to cover these increases, were due to a number of reasons including (TE, pg 8-9):

- Considerable delays throughout the project, most of which were attached to the World Bank and IADB financed portions of the project, increased project costs. Delays are detailed below;
- Cost increases with regard to civil works. Cost increases were attributable to different causes, including (i) changes once final engineering designs were ready; (ii) the devaluation of the dollar; (iii) the worldwide increase in the price of key construction inputs such as steel, cement and fuel; (iv) Peru's fast pace of economic growth, which strained the capacity of construction firms and

diminished the supply of construction services; (v) the increase in project administration costs due to the complexity of contracting and the longer implementation period; and (vi) the cost increase of the Central Station, which was built underground instead of at ground level.

6.2. *Delays*

6.2.1. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If it did, then in what ways and through what causal linkages?

The project experienced substantial delays in both implementation and completion. This included a year delay in project implementation from loan approval, and a nearly two-year delay in the completion date. However, it should be noted that most of the delays were attatched to the World Bank and IADB financed portion of the project. Reasons given in the TE for delays are (TE, pg 8-9):

- Delays related to the World Bank's lack of experience in working with municipal governments in Peru, which resulted in longer than expected time to prepare and comply with government financial requirements.
- MML took considerable time to comply with loan conditions, which delayed project start-up by more than a year after loan approval;
- Bank financing required the harmonization of procurement procedures and bidding documents with the IADB;
- Cost overruns and delays attributed to the weak institutional capacity of Protransporte to manage a complex project.

The GEF portion of the project was actually completed in 2010, one year after its expected completion. Delays in the GEF financed activities are attributable to:

- Slowness in project implementation. In particular, the definition, bidding and implementation of bikeway works and the Study for the Consolidation of the Integrated Public Transport System in Metropolitan Lima moved at a slower pace than expected;
- There was uncertainty about the bus scrapping mechanism and a lengthy project restructuring that took place.

Despite these delays, there appears to be no major effects on the project's outcomes or sustainability except that bicycle promotion activities were not given adequate time following establishment of enhanced bikeways to yield more positive results (TE, pg 21).

6.3. *Country ownership*

6.3.1. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

Overall, country ownership of the project's activities and outcomes is strong. This is most clearly evidenced in the decision of the local government to substantially increase their co-financing contribution, so as to allow for the full realization of development outcomes (the BRT line). As noted in the TE, government commitment to the project was further demonstrated through the allocation of budget resources for communication campaigns and rationalization of bus operators. The new municipal administration, which took office in 2011, is demonstrating commitment to continuation of key institutional reforms in Lima's transport sector (TE, pg 30).

Country ownership of the GEF-financed component of the project was moderately satisfactory, with a few shortcomings. They include

- There was incomplete political support from the MML on the bus scraping project. This was a sensitive political issue, and MML changed its mind several times on how to proceed, delaying the project's execution.
- TE notes that during the implementation of the Study for the Consolidation of the Integrated Public Transport System in Metropolitan Lima, "some of the issues did not receive immediate attention at the highest levels" (TE, pg 30). This contributed to project delays.
- The Provincial Municipality of Callao strongly supported the bicycle promotion activities throughout project implementation, but invested less than it had originally committed to. This delayed the approval and completion of GEF-financed bikeways in Callao (TE, pg 31).

7. Assessment of project's Monitoring and Evaluation system

7.1. *M&E design at entry* – **Satisfactory**.

M&E for both the Bank/IADB financed portion of the project and the GEF-financed activities was very strong. Indicators were designed adequately and were fairly comprehensive, and gave a good indication of the progress and impact of the project. There were also provisions for the establishment of all relevant baselines, and a clear timetable for reporting. M&E activities were also clearly budgeted. The only noticeable shortcoming was a failure to include any indicators on policy changes that could be anticipated to arise from some of the project's capacity building and promotion of sustainability activities. These outcomes were however reported on in the PIRs and TE.

7.2. *M&E implementation* – **Highly Satisfactory.**

M&E was implemented according to schedule and thoroughly. This included a midterm evaluation. M&E implementation tracked progress on key indicators, and provided a clear indication of both the failings and achievements of the project.

8. Assessment of project's Quality of Implementation and Execution

8.1. *Overall Quality of Implementation and Execution* – **Moderately Satisfactory**

8.2. *Overall Quality of Implementation* – **Satisfactory.**

As noted in the TE, the design and preparation fo the GEF grant benefitted from lessons learned through previous transport projects. In particular, the design of the bus-scrapping component was based on experiences in Bogota, and the bicycle component was based on previous WB experience in Lima and elsewhere. Design issues that negatively affected the GEF project include the failure to define at project outset where bikeways would be sited. This was instead left to studies that did not come until a year or two after project execution, which delayed the construction of bikeways. The TE also notes that the target for increased bicycle use was overly ambitious given the short amount of time, and the requirement of a cultural shift in attitudes (TE, pg 8).

Some of the delays in the GEF-financed portion of the project were related to issues that came up in the Bank/IADB financed activities and that have been detailed above. On the whole, Bank supervision was strong, as evidenced by the delivery of the bulk of desired project outcomes, the strong fiduciary control over the project, the execution of all project M&E activities, and perseverance through many challenges that arose throughout the project.

8.3. *Overall Quality of Execution* – **Moderately Satisfactory.**

As noted in the TE, the GEF grant activities benefited from committed project staff, particularly the project coordinator in FONAM;

Factors that detracted from Executing Agencies' performance included:

- Capacity weaknesses and frictions at the start of the project. Capacity increased over time, although the project suffered a setback with the early departure of the FONAM project coordinator;
- Project execution of the integrated transport study and bikeways was slower than expected. Some of this is attributable to a lack of capacity in FONAM.
- There was indecision on the bus scrapping program, linked to incomplete political support for the effort (TE, pg 10).

In light of these shortcomings, the overall rating for EAs is moderately satisfactory.

9. Quality of the Terminal Evaluation Report

Criteria	Rating	GEF EO Comments
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	**Satisfactory**	TE provides a clear assessment of outcomes, impacts and achievements of the project. It was not clear however how monitoring of air quality in Lima was achieved and who was responsible for continuing this activity going forward.
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	**Satisfactory**	Report is internally consistent, and the evidence provided is compelling. However, given the vast amount of activities associated with the bicycle promotion component that are detailed in the TE, and the large numbers of students supposedly trained and reached, it was surprising that more significant results were not found in bicycling uptake in Lima.
To what extent does the report properly assess project sustainability and/or project exit strategy?	**Satisfactory**	Report is clear in its assessment of project sustainability and the risks posed. More attention could have been provided to assessing the sustainability of the project's environmental monitoring.
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	**Satisfactory**	Lessons learned are consistent with the evidence presented and are comprehensive.
Does the report include the actual project costs (total and per activity) and actual co-financing used?	**Moderately Unsatisfactory**	It was not clear from the TE the level of co-financing for bikeways, particularly those in the district municipality of Callao, and how much bikeway infrastructure was also supported by the loan from the Bank and IADB.
Assess the quality of the report's evaluation of project M&E systems:	**Satisfactory**	The report does a good job at assessing the project's M&E systems which are comprehensive. The only shortcoming is in failing to provide information on the sustainability of the project's environmental monitoring.

10. Other issues to follow up on

11. Sources of information

Annex I – Project Impacts As Assessed by the GEF EO

Did the project have outputs contributing to knowledge being generated or improved?	Yes

WHAT OUTPUTS CONTRIBUTED TO KNOWLEDGE BEING GENERATED OR IMPROVED?

Outputs that contributed to knowledge generation and improvement include:

* Project financed a study for the Consolidation of the Integrated Public Transport System in Metropolitan Lima. In it, a potential second BRT corridor is identified, as well as preliminary engineering studies, environmental and social analysis. Part of the study included a GHG emission inventory for Metropolitan Lima, and recommended institutional, regulatory, and legal changes to facilitate public transport integration.
* Provided assistance to Protransporte for the preparation and publication of a comprehensive operational and environmental manual for bus scrapping.
* Project financed surveys on bicycle safety as well as a legal study on bike safety.
* Project financed the production of a video on traffic safety for cyclists and pedestrians that is shown in the office where people obtain their driver's' licenses.
* Project financed a comprehensive Bicycle Master Plan for Lima Callao.
* Project financed the design of an institutional and capacity-strengthening program for sustainable transport that was the basis for a number of awareness-raising and capacity-building events.
* Project financed a study to identify the priority bikeways in various districts of Lima based on potential demand and other characteristics. The study was aimed at providing guidance to districts on how to implement their own bikeway infrastructure.

Is there evidence that the knowledge was used for management/ governance?	Yes

HOW WAS THIS KNOWLEDGE USED AND WHAT RESULTED FROM THAT USE?

Evidence that knowledge was used for management or governance includes:

* Protransporte is undertaking a bus scrapping program which has many of the features identified in the GEF-assisted study.
* TE notes that results of the surveys on bicycle safety were taken into account when the engineering designs for bikeway rehabilitation and construction were prepared (TE, pg 52).
* TE notes that the legal study on bicycle safety formed the basis for the national law on bicycle use approved in 2010 (Estudio de normativa para un ciclismo urbano mas seguro en Lima y Callao) (TE, pg 52).
* TE notes the Bicycle Master Plan for Lima and Callao was approved by the MML (TE, pg 54).
* TE notes that a number of districts that were the target of the study on potential bikeways in Lima have started planning, implementing, or improving bikeways. These include: Santiago de Surco, San Borja, La Molina and Miraflores (TE, pg 56).

Did the project have outputs contributing to the development of databases and information-sharing arrangements?	Yes

WHAT OUTPUTS CONTRIBUTED TO INFORMATION BEING COMPILED AND MADE ACCESSIBLE TO MANY?

The project established a sustainable transport website, which includes all project outputs:
http://www.fonamperu.org/general/transp/bienvenida.php

Is there evidence that these outputs were used? UA

TO WHAT EXTENT HAVE THESE OUTPUTS BEEN USED?
WHAT HAS RESULTED FROM INFORMATION BEING MADE ACCESSIBLE TO OTHERS?

No information is provided in the TE or PIRs on whether project outputs were accessed through the project website, although it can be inferred that the site has been utilized to some degree, given the overall success of the project.

Did the project have activities that contributed to awareness and knowledge being raised? Yes

WHAT ACTIVITIES CONTRIBUTED TO AWARENESS AND KNOWLEDGE BEING RAISED?

Project activities that contributed to awareness and knowledge being raised include (TE, pg 22):
* The project supported the organization of 12 conferences on different sustainable transport-related topics with the participation of international experts. These events attracted nearly 2,800 people.
* The project financed 17 training courses on sustainable transport topics through which 423 people were trained.
* Under the framework of the Study for the Consolidation of the Integrated Public Transport System in Metropolitan Lima, more than 10 Protransporte staff members were trained.
* Numerous trainings were conducted as part of the bicycle promotion campaign. These were held at schools, and later universities and public places, and during sustainable transport-related events. As noted in the TE, by the end of 2008 (i) about 42,000 students received classroom talks and participated in workshops on environmental and sustainable transport-related topics, (ii) about 6,000 students learned how to ride a bicycle, (iii) about 34,000 students were trained in cycling skills, and (iv) about 11,000 were trained in bicycle-repair skills (TE, pg 53).

Was any ***positive*** change in behavior reported as a result of these activities? Yes

WHAT BEHAVIOR (POSITIVE OR NEGATIVE) HAS CHANGED AS A RESULT?

As noted in the TE, although it is impossible to determine if the institutional training activities listed above have contributed to a modal shift toward more sustainable transport and associated reductions in GHGs, there are positive indications that it has. Positive signs include:
(1) an increasing number of municipalities are implementing their own bicycle-infrastructure and traffic-calming measures;
(2) increased spending to improve public transport;
(3) increased participation of municipalities in the Competition for Good Administrative Practices, under the category of "Sustainable Transport";
(4) the National Government's legal initiative to convert diesel vehicles to compressed natural gas.

TE reports a slight increase in the 2007-2009 period of the number of students traveling to school by bicycle: from 10 to 13 percent. The number of students who said they used their bicycles every day increased from 30 to 37 percent, and those who stated that bicycle use improved the environmental increased from 24 to 87 percent (TE, pg 21-22).

Did the project activities contribute to building technical/environmental management skills? Yes

WHAT ACTIVITIES CONTRIBUTED TO ***TECHNICAL/ENVIRONMENTAL MANAGEMENT SKILLS*** BEING BUILT OR IMPROVED?

Project activities that contributed to building technical and/or environmental management skills include (TE, pg 22):
* The project supported the organization of 12 conferences on different sustainable transport-related topics with the participation of international experts. These events attracted nearly 2,800 people.
* The project financed 17 training courses on sustainable transport topics through which 423 people were trained.
* Under the framework of the Study for the Consolidation of the Integrated Public Transport System in Metropolitan Lima, more than 10 Protransporte staff members were trained.

Is there evidence of these skills being applied by people trained? Yes

HOW HAVE THESE SKILLS BEEN APPLIED BY THE PEOPLE TRAINED?

Evidence that skills developed as a result of project activities have been applied by people trained include:

(1) an increasing number of municipalities are implementing their own bicycle-infrastructure and traffic-calming measures; (2) the first BRT line established as a result of the bank-financed part of the project, but assisted through GEF-supported trainings of Protransporte members has been a success in terms of ridership and a substantial increase in rider satisfaction, as reported in the TE.

Did the project contribute to the development of legal / policy / regulatory frameworks? Yes

Were these adopted? Yes

WHAT LAWS/ POLICIES/ RULES WERE ADOPTED AS A RESULT OF THE PROJECT?

* TE notes that the legal study on bicycle safety formed the basis for the national law on bicycle use approved in 2010 (Estudio de normativa para un ciclismo urbano mas seguro en Lima y Callao) (TE, pg 52).
* TE notes the Bicycle Master Plan for Lima and Callao was approved by the MML (TE, pg 54).

Did the project contribute to the development of institutional and administrative systems and structures? Yes

Were these institutional and administrative systems and structures integrated as permanent structures? Yes

WHAT OFFICES/ GOVERNMENT STRUCTURES WERE CREATED AS A RESULT OF THE PROJECT?

The project, along with the MML, established Protransporte, the decentralized public entity of MML charged with overseeing the design, operation, and expansion of Lima's Bus Rapid Transport system.

Did the project contribute to structures/ mechanisms/ processes that allowed more stakeholder participation in environmnetal governance? No

Were improved arrangements for stakeholder engagement integrated as permanent structures?

WHAT STRUCTURES/ MECHANISMS/ PROCESSES WERE SUPPORTED BY THE PROJECT THAT ALLOWED MORE STAKEHOLDERS/ SECTORS TO PARTICIPATE IN ENVIRONMENTAL GOVERNANCE/ MANAGEMENT ACTIVITIES?

Did the project contribute to informal processes facilitating trust-building or conflict resolution?	No

WHAT PROCESSES OR MECHANISMS FACILITATED TRUST-BUILDING AND CONFLICT RESOLUTION? WHAT RESULTED FROM THESE?

Did the project contibute to any of the following:		Please specify what was contributed:
Technologies & Approaches	Yes	Establishment of high-speed, segregated, bus rapid transport system and enhancements and expansion of non-motorized infrastructure in Lima. Both efforts laid the groundwork for future expansion in Peru.
Implementing Mechanisms/Bodies	No	
Financial Mechanisms	Yes	Establishment of a program for the purchase and retirement of old, inefficient buses in Lima.

Did r**eplication** of the promoted technologies, and economic and financial instruments take place?	Yes

SPECIFY WHICH PLACES IMPLEMENTED WHICH TECHNOLOGIES/APPROACHES OR ASPECTS OF A TECHNOLOGY/APPROACH.

WHAT WAS THE RESULT IN THOSE PLACES (ENVIRONMENTAL & SOCIOECONOMIC)?

As noted in the TE, an increasing number of municipalities are implementing their own bicycle-infrastructure and traffic-calming measures.

Did **scaling-up** of the promoted approaches and technologies take place?	Yes

SPECIFY AT WHAT ADMINISTRATIVE & ECOLOGICAL SCALE AND WHICH TECHNOLOGIES/APPROACHES OR ASPECTS OF A TECHNOLOGY/APPROACH WAS ADOPTED.

HOW WAS IT MODIFIED TO FIT THE NEW SCALE? WHAT WAS THE RESULT AT THE NEW SCALE/S (ENVIRONMENTAL & SOCIOECONOMIC)?

Bicycle infrastructure and traffic calming measures have spread from one district in Lima, to several others in Lima.

Did **mainstreaming** of the promoted approaches and technologies take place?	Yes

SPECIFY HOW (MEANS/ INSTRUMENT) AND WHICH ASPECTS OF THE TECHNOLOGY/APPROACH WAS INCORPORATED INTO THE EXISTING SYSTEM. WHAT WAS THE RESULT OR STATUS (ENVIRONMENTAL & SOCIOECONOMIC)?

* A new national law promoting bicycle use was approved in 2010 (Estudio de normativa para un ciclismo urbano mas seguro en Lima y Callao) (TE, pg 52).
* The new president of Peru, in his inaugural speech in 2011, stated that the government will support the development of urban transport activities in Lima.
* TE reports increased spending to improve public transport in Peru over the course of the project. How much, if any, of this is due to the project's activities is unknown.

Did r**emoval of market barriers** and sustainable market change take place? No

SPECIFY HOW DEMAND HAS BEEN CREATED FOR WHICH PRODUCTS/ SERVICES THAT CONTRIBUTE TO GEBs.

Based on most of the project's components and/or what it generally intended to do, what type of project would you say this is?

Combination *<--dropdown menu*

If "combination", then of which types?

Institutional Capacity (governance) & Implementation Strategies *<--dropdown menu*

*QUANTITATIVE OR ANECDOTAL DETAILS ON HOW ENVIRONMENTAL **PRESSURE HAS BEEN REDUCED/PREVENTED** OR ON HOW ENVIRONMENTAL **STATUS HAS CHANGED** AT THE DEMONSTRATION SITES AS A CONTRIBUTION/RESULT OF PROJECT ACTIVITIES. FOR SYSTEM LEVEL CHANGES, SPECIFY THE ADMINISTRATIVE AND/OR ECOLOGICAL SCALES.*

Was stress reduction achieved? Yes

If so, at what scales? Please mark 'x' for all that apply

X	Local	x	Intended (local)		Unintended (local)
X	Systemic	x	Intended (systemic)		Unintended (systemic)

How was the information obtained?

x	Measured		Anecdotal

Was there a change in environmental status? No

If so, at what scales? Please mark 'x' for all that apply

	Local		Intended (local)		Unintended (local)
	Systemic		Intended (systemic)		Unintended (systemic)

How was the information obtained? | | Measured | | Anecdotal

Evidence of intended stress reduction achieved at the **local level**

* Atmospheric concentrations of transport-linked particulate matter decreased during the project's execution (2005-2010). Much of this is related to the establishment of the BRT line, which the GEF-supported through institutional capacity building (WB loan financed the BRT infrastructure) (TE, pg 20).

Evidence of intended stress reduction at a **systemic level**

* GHG reductions of 324,440 CO_2 eq tons/year as a result of establishing the BRT line (TE, pg 19)
* Anticipated near-term reductions of 33,130-43,536 CO_2 eq tons/year as a result of the bus scrapping activities (TE, pg 24).
* Reductions of 22 CO_2 eq tons/year as a result of bicycle infrastructure and promotion to date (TE, pg 23).

Evidence of intended changes in environmental status at the **local level**

Evidence of intended changes in environmental status at a **systemic level**

Evidence of unintended changes in stress or environmental status at the **local level**

Evidence of unintended changes in stress or environmental status at the **systemic level**

Were arrangements to collect data on stress reduction and environmental & socioeconomic status in place during the project?

Environmental	Yes
Socioeconomic	Yes

To what extent were arrangements in place and being implemented during the project? Briefly describe arrangements.

A substantial portion of the GEF grant (~$1 million) went towards studies to quantify and monitor the global environmental impacts of project, including:
* an assessment of the GHG impact of bicycle activities;
* a GHG emission inventory for mobile sources in Metropolitan Lima;
* an evaluation of the GHG emission impact of the second BRT corridor;
* Protransporte assessed the GHG impact of te first BRT corridor, including the evaluation of bus scrapping.
* Project included plans to monitor any socioeconomic impacts on drivers affected by the bus scraping and BRT project.

To what extent did these arrangements use parameters/ indicators to measure changes that are actually related to what the project was trying to achieve?

The project was well designed to clearly measure the environmental impacts of interest to the project, specifically GHG emissions and particulate matter concentrations linked to Lima's transport sector.

Were arrangements to collect data on stress reduction and environmental & socioeconomic status in place to function after the project?

Yes

To what extent were arrangements put into place to function after GEF support had ended? Briefly describe arrangements.

The ProDoc states that the project will greatly increase the ability of local authorities in Lima to monitor air quality, through the acquisition of new equipment and monitoring by the Clean Air Committee and the Ministry of Health which has an assured budget for the operation and maintenance of the air quality system (ProDoc, pg 62). No information on whether this will take place going forward is provided in the TE or PIR.

Was there a government body/ other permanent organization with a clear mandate and budget to monitor environmental and/or socioeconomic status?

The ProDoc states that the exiting Clean Air Committee and the Ministry of Health is responsible for the air quality monitoring in Lima. Other assessments of GHG emissions inventories and socioeconomic status were the responsibility of the project team and it is not clear from the TE or PIRs whether any of these activities will continue after the project and who will be responsible.

Has the monitoring data been used for management? Yes

How has the data been used for management? Describe mechanisms and actual instances.

It is assumed that both emissions data (particulate and GHG) has been used to plan the BRT system and bike infrastructure systems in Lima, however direct evidence of this is not provided in the TE or PIRs.

Has the data been made accessible to the public? Yes

How has the data been made accessible to the public? Describe reporting systems or methods.

Project documents that include information on GHG and particulate monitoring are available on the project's website. It is assumed that air quality monitoring done by the government of Lima is publically available, but no information on this is provided in the TE or PIRs.

"SOCIOECONOMIC" REFERS TO ACCESS TO & USE OF RESOURCES (DISTRIBUTION OF BENEFITS), LIVELIHOOD, INCOME, FOOD SECURITY, HOME, HEALTH, SAFETY, RELATIONSHIPS, AND OTHER ASPECTS OF HUMAN WELL-BEING .AS MUCH AS POSSIBLE, INCLUDE "BEFORE" AND "AFTER" NUMBERS, YEARS WHEN DATA WAS COLLECTED, AND DATA SOURCES.

Did the project contribute to **positive** socioeconomic impacts? Yes

If so, at what scales? Please mark 'x' for all that apply

X	Local	X	Intended (local)		Unintended (local)
	Systemic		Intended (systemic)		Unintended (systemic)

How was the information obtained?

	Measured		Anecdotal

Did the project contribute to **negative** socioeconomic impacts? No

If so, at what scales? Please mark 'x' for all that apply

	Local		Intended (local)		Unintended (local)
	Systemic		Intended (systemic)		Unintended (systemic)

How was the information obtained?

	Measured		Anecdotal

Evidence on intended socio-economic impacts at the **local level**

* Improved mobility as a result of the BRT line and bike infrastructure. TE reports that travel times have been reduced by 34% for residents in the affected travel corridors (TE, pg x).
* Fatal and serious accidents in the main corridor of the BRT line have been reduced by 65% under baseline (TE, pg xi).

Evidence on intended socio-economic impacts at **systemic level**

Evidence on unintended socio-economic impacts at the **local level**

Evidence on unintended socio-economic impacts at **systemic level**

Briefly describe the key lessons, good practice or approaches mentioned in the terminal evaluation report

Following is a summary of lessons learned, provided it the terminal evaluation:

* The choice of the right implementation agency is difficult but crucial. FONAM was agile in handling the management aspects of the grant, but lacked the political support for bikeway construction and bus scrapping. This made project execution more difficult and had an impact on the final results (TE, pg 30).
* Successful bicycle-use promotion requires a long-term engagement which cannot be ensured through a single externally financed project.
* Reaching out to employers and employees in promoting bicycle use is difficult but important for short-term results.
* In a large city such as Lima, it is better to work with a few districts, rather than spread out thinly across the whole city. Specifically with regard to bicycle promotion and infrastructure, its better to create a network rather than dispersed lanes.
* If the objective is to reduce GHG emissions, project interventions in developing countries should focus on wealthier areas, where people with access to individual transport live.
* Although it is obvious that successful bicycle promotion requires safe parking facilities, these are not easy to achieve.
* Bikeways are generally welcome as long as there is surplus road space that is not needed for car parking.
* Bicycle-promotion programs in schools should focus right from the beginning on teaching the teachers.
* Bus scrapping requires strong political support.

Briefly describe the recommendations given in the terminal evaluation

No recommendations going forward are provided in the terminal evaluation.