

Report No. 58832-PE



Investigation Report

**Peru: Lima Urban Transport Project
(Loan 7209-PE)**

January 18, 2011

About the Panel

The Inspection Panel was created in September 1993 by the Board of Executive Directors of the World Bank to serve as an independent mechanism to ensure accountability in Bank operations with respect to its policies and procedures. The Inspection Panel is an instrument for groups of two or more private citizens who believe that they or their interests have been or could be harmed by Bank-financed activities to present their concerns through a Request for Inspection. In short, the Panel provides a link between the Bank and the people who are likely to be affected by the projects it finances.

Members of the Panel are selected “*on the basis of their ability to deal thoroughly and fairly with the request brought to them, their integrity and their independence from the Bank’s Management, and their exposure to developmental issues and to living conditions in developing countries.*”¹ The three-member Panel is empowered, subject to Board approval, to investigate problems that are alleged to have arisen as a result of the Bank having failed to comply with its own operating policies and procedures.

The Panel’s work embraces the fundamental principles of independence, integrity, and impartiality. These cornerstone principles enable the Panel to respond to the issues raised and to provide technically sound, independent assessments to the Bank’s Board.

Processing Requests

After the Panel receives a Request for Inspection, it is processed as follows:

- The Panel decides whether the Request is *prima facie* not barred from Panel consideration.
- The Panel registers the Request—a purely administrative procedure.
- The Panel sends the Request to Bank Management, which has 21 working days to respond to the allegations of the Requesters.
- The Panel then conducts a short 21 working-day assessment to determine the eligibility of the Requesters and the Request.
- If the Panel recommends an investigation, and the Board approves it, the Panel undertakes a full investigation, which is not time-bound.
- If the Panel does not recommend an investigation, the Board of Executive Directors may still instruct the Panel to conduct an investigation if warranted.
- Three days after the Board decides on whether or not an investigation should be carried out, the Panel’s Report (including the Request for Inspection and Management’s Response) is publicly available through the Panel’s website and Secretariat, the Bank’s Info Shop and the respective Bank Country Office.
- When the Panel completes an investigation, it sends its findings and conclusions on the matters alleged in the Request for Inspection to the Board as well as to Bank Management.

¹ IBRD Resolution No. 93-10; IDA Resolution No. 93-6.

- The Bank Management then has six weeks to submit its recommendations to the Board on what actions the Bank would take in response to the Panel's findings and conclusions.
- The Board then takes the final decision on what should be done based on the Panel's findings and the Bank Management's recommendations.
- Three days after the Board's decision, the Panel's Report and Management's Recommendation are publicly available through the Panel's website and Secretariat, the Bank's Project website, the Bank's Info Shop and the respective Bank Country Office.

Acknowledgements

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Abbreviations, Acronyms, and Terms

BP	Bank Procedures
BRT	Bus Rapid Transit
CNG	Compressed Natural Gas
COSAC	High-capacity Segregated (bus) Corridor (Corredor Segregado de Alta Capacidad)
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GEF	Global Environment Facility
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
INC	National Institute of Culture (Instituto Nacional de Cultura)
IPN	Inspection Panel
LUTP	Lima Urban Transport Project
Metropolitano	BRT project implemented by Protransporte with World Bank and IDB financing
MML	Municipality of Metropolitan Lima
MTC	Ministry of Transport and Telecommunications (Ministerio de Transporte y Comunicaciones)
NGO	Non-Governmental Organization
OMS	Operational Manual Statement
OP	Operational Policy
OPN	Operational Policy Note
PAD	Project Appraisal Document
PDO	Project Development Objective
PID	Project Information Document
Protransporte	Protransporte Metropolitan Institute of Lima (Instituto Metropolitano Protransporte de Lima)
SEA	Strategic Environmental Assessment
TOR	Terms of Reference
WB	World Bank

Overview

On October 1, 2009, the Inspection Panel received a Request for Inspection (the “Request”) related to the Peru: Lima Urban Transport Project (the “Project”). The Request was submitted by residents of the District of Barranco within the Lima Metropolitan area (the Requesters), who claim they are suffering and will suffer harm as a result of the “*deficiencies and omissions*” of the World Bank in the design and implementation of the Project as it relates specifically to Barranco.

The Project supports the construction of a bus rapid-transit system (BRT) through the city of Lima. The Project includes a bus corridor in Barranco, a coastal district located in the south-east of Lima between the relatively wealthier Miraflores District and the relatively low-income Chorillos District, where the bus route ends. Barranco was designated a historical district by the National Institute of Culture in 1972.

Through much of its trajectory, the bus corridor runs through the middle of a major highway. However, in Barranco the bus corridor runs through Avenida Bolognesi, a former four-lane avenue that connects Barranco with the center of Lima. Two of the avenue’s four former lanes have been converted for the busway. The remaining two lanes on Avenida Bolognesi can be used by vehicles going in a northbound direction. Southbound traffic, however, has been permanently re-routed through the west side of Barranco.

The Panel wishes to underscore the key importance of the Lima Urban Transport Project for the City of Lima and commends Management for their decision to support this vital sector. During its visits to Lima, the Panel witnessed the high traffic volume in the city and the long commuting times between various locations, and observed that all parties involved, including the Requesters, highlighted the urgent need to improve transport conditions in Lima and the importance of the Bus Rapid Transit system for the city.

Key Claims Presented to the Panel. The Requesters reside in both the eastern and western side of the newly constructed busway on Avenida Bolognesi in Barranco. They and other affected people express concerns about what they believe are longer-term adverse impacts that will remain after the BRT becomes operational, and raise issues related both to the design and implementation of the Project.

The Request identifies the most serious harms that the Requesters believe were caused by the Bank’s omissions in following its own policies. In the Requesters’ view, the permanent re-routing of traffic, caused by the Project, has severely affected traffic in Barranco, leading to health and safety concerns, deterioration in the conservation of the historic area of Barranco and adverse social and economic impacts. In particular, they state that the traffic that was re-routed from Avenida Bolognesi is posing great danger to the District’s historical and “monumental” heritage and deteriorating its quality of life because of very high volume of traffic and pollution.

The Requesters believe they have been harmed because the Environmental Assessment for the Project did not include environmental management plans or any plans to mitigate negative environmental impacts in Barranco, and consultations with Barranco residents about the Project

were inadequate. In this context, they claim that the potential negative impacts of the Project in the District of Barranco were not adequately analyzed and mitigation measures not properly identified. They believe that this situation is the result of a flawed impact assessment and an inadequate mitigation plan. In this context, the Requesters also complain that no timely information about the Project was provided to affected people, and especially that consultations were not carried out with residents of Barranco. The Requesters argue that, as a result, they could not provide their inputs into a decision-making process that deeply affected their own district, and their views -- not only on the design of the corridor itself but also on the impacts of the Project on Barranco's traffic and historical heritage -- were disregarded.

Panel Findings on Harm and Compliance. This Report presents the results of the Panel's investigation on each of the issues of compliance and harm raised in the Request for Inspection. The focus of the Panel's investigation was to establish whether the Bank complied with its own policies and procedures in the design, appraisal, and implementation of the Project, and whether, if instances of noncompliance were found, they caused, or were likely to cause, the harm or potential harm alleged by the Requesters and the people they represent. Key issues of compliance are considered in chapters 2 and 3, including policies relevant to this investigation: Project Appraisal, Environmental Assessment, Management of Cultural Property and Project Supervision.

The Panel notes that, independently of the Project, there have been significant increases in traffic volumes in recent years both in Lima as a whole and in Barranco in particular. These increases in vehicular traffic in the streets of Barranco, together with the parallel increase in residential and commercial construction in the district and the fact that it has become a magnet for tourists and Lima residents alike, have been changing the character of Barranco from a quiet, predominantly residential neighborhood to a center for recreation and entertainment. In the Panel's view, the significant and poorly managed changes in traffic in Barranco as a result of the Project, superimposed on the construction work associated with the BRT and the general changes in the urban character of Barranco described above, have caused deterioration in the quality of life of many residents of Barranco and posed a threat to the district's historical character. In addition, the poor quality of some of the Project work along the Avenida Bolognesi in Barranco, such as pavements and pedestrian crossings, as well as delays in the construction process, have added to the hazards, aggravation, inconvenience and frustration suffered by the residents of Barranco. These harms cannot, in fairness, be solely attributable to the Project, and some of them may be reduced as the BRT enters a fully operational stage. Nevertheless, they are significant.

The Panel found five areas where Bank policy was not complied with and where policy compliance could have helped mitigate the harms in Barranco identified above:

- While the Environmental Assessment studies had an acceptable quality on issues that directly affected BRT construction and operation, there was little concern and analysis of impacts beyond the corridor itself, such as changes in pedestrian and vehicular traffic flows and their economic and cultural impacts. Scarce attention was paid to identifying and mitigating potential negative impacts of the Project on the Barranco neighborhood beyond the immediate impacts of construction and operation

of the BRT, falling short of meeting the requirements of Bank Policy as far as the analysis concerns the District of Barranco as a whole.

- Dissemination of information and consultation with the affected people in Barranco failed to meet the requirements of Bank Policy, especially in the early phases of the Project and during a good part of Project implementation. Only when residents began voicing their concerns in a more organized fashion were actions taken to hear their views and address their concerns. The lack of adequate consultations, particularly during the critical design phase of the Project, appears to have been a spark for tension and conflict about this important project for the City of Lima. The Panel notes, however, that Management brought the Project into compliance with the consultation requirements of OP 4.01 by engaging the residents of Barranco in consultations events, including by establishing a round table in 2009 to discuss short and long term solutions for traffic problems as a result of the Project.
- Although a 2005 traffic study offered the opportunity to evaluate the permanent impacts of the Project on the traffic patterns of Barranco and to devise adequate measures to mitigate them, the study presented a number of weaknesses, especially with respect to the depth of the evaluation of the impacts the Project may cause on the traffic conditions in Barranco. Furthermore, the traffic re-routing pattern recommended in the Traffic Study, which the Panel experts consider optimal, was not implemented, and a different traffic pattern was actually put in place. The Panel found no record indicating when and why the 2005 traffic re-routing recommendation was changed, nor any analysis of the traffic pattern alternative and its impacts.
- Supervision of Project activities related to the District of Barranco was not consistently up to speed with events and circumstances on the ground until Barranco residents started to raise their complaints. Once problems were identified through residents' complaints and supervision missions, supervision activities strengthened and a number of actions were taken to address the issue, in compliance with Bank Policy on Project Supervision. One important such action is a new traffic management study to analyze and compare different alternatives, including an alternative proposed by residents of Barranco.
- There was no adequate analysis of the historic neighborhood or monuments and of the potential impacts of the Project on them. In particular, the EAs prepared under the Project do not mention the potential problems associated with the impacts of re-routed traffic on buildings and public places of interest. To the Panel's knowledge, a detailed study of these issues has yet to be carried out, which is not in compliance with Bank policy on cultural property issues.

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EXECUTIVE SUMMARY

The Inspection Panel has prepared this Investigation Report in response to a Request for Inspection related to the Peru: Lima Urban Transport Project (LUTP, or the “Project”). The Request was submitted on October 1, 2009, by residents of the Barranco District within the Lima Metropolitan area.

At the outset, the Panel wishes to underscore the key importance of the Lima Urban Transport Project for the City of Lima and commends Management for their decision to support this vital sector. During its visits to Lima, the Panel witnessed the high traffic volume in the city and the long commuting times between various locations, and observed that all parties involved, including the Requesters, highlighted the urgent need to improve transport conditions in Lima and the importance of the Bus Rapid Transit system for the city.

Project Objectives, Context and Components

The Project. The Project supports the construction of a bus rapid-transit system (BRT) through the city of Lima. The Bank financing for the Project was approved in June 2004 with the operational objective of *“assisting 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 Project is partially financed by an International Bank for Reconstruction and Development loan of US \$ 45,000,000, and was approved by the Board of Executive Directors on December 9, 2003. The Loan was extended twice and is expected to close on December 30, 2010.

The Project is financing the first phase of an integrated mass rapid transport system, the “Metropolitano”, which includes a basic network of high capacity bus corridors (Corredor Segregado de Alta Capacidad, COSAC), running north to south through Lima. The Project includes a bus corridor in Barranco, a coastal district located to the southeast of Lima.

The Project is composed of six interrelated components: 1) Mobility and Environmental Improvements; 2) Social Mobility and Community Participation; 3) Institutional Strengthening; 4) Studies and Construction Supervision; 5) Program Administration; 6) Grade Separation of Plaza Grau. The entity responsible for implementation is the Protransporte Metropolitan Institute of Lima, established in 2002 under the Municipality of Metropolitan Lima (MML).

Barranco. The Project includes a bus corridor through Barranco on Avenida Bolognesi, a former 4-lane avenue that connects Barranco with the center of Lima. Two of the avenue’s former lanes have been converted for the busway. Barranco was designated a historical district by the National Institute of Culture in 1972.

The Requesters' Complaints

The Requesters are community members who reside in the District of Barranco in both the eastern and western side of the newly constructed busway on Avenida Bolognesi. They are concerned that the Project has had and will have adverse long-term impacts bound to remain after the BRT becomes operational. The Requesters believe that the Project has severely affected traffic and pedestrian safety, the residential character of the District and caused “*irreparable*” harm to the Barranco historical district.

The Request identifies the most serious harms that they believe were caused by the Bank’s omissions in following its own policies. Overall, the Requesters believe they have been harmed because the Environmental Assessment for the Project did not include environmental management plans or any plans to mitigate negative environmental impacts, and consultations about the Project were inadequate. In the Requesters’ view, the Project and the permanent rerouting of traffic it has required has severely affected traffic in Barranco, leading to health and safety concerns, the deterioration in the conservation of the historic area of Barranco, and adverse social and economic impacts.

Management Response

In response to the Request, Management states that traffic conditions in Lima have deteriorated and that the City’s poorest residents residing on the periphery suffer the most because of the time and effort it takes to travel in this congested city. Management believed Lima’s size and economic growth imperatives required a mass rapid transit system such as the Metropolitano.

District of Barranco. Management explained that the Avenida Bolognesi alignment was chosen “*because the avenue was already a major public transport corridor*” and Management wanted “*to avoid expropriation and resettlement*” in the historic area of Barranco. Management believes that Barranco’s traffic problems are “*in large part unrelated to the Metropolitano*” and are due to the increase in vehicular traffic in general and the existence of commercial and high rise buildings in the District.

Management does acknowledge that the construction phase of the Project “*exacerbated traffic problems in Barranco.*” However, Management believes traffic conditions in Barranco would improve once the Metropolitano became operational.

Management accepted that OP 4.01’s (Environmental Assessment) requirements regarding mitigation of “*residual adverse impacts has not been fully met*” and that “*informed consultation with concerned groups was not always implemented satisfactorily.*” Management believed it had met OP 4.01’s requirements relating to traffic management measures and assessment of alternatives. Management stated that, while requirements of OP 4.01 were met during preparation and appraisal, disclosure “*did not always meet the policy’s requirements.*”

Management Response stated that local consultations on the Strategic Environmental Assessment (SEA) and draft EIA were held, focus groups were established, the draft EIA was posted online for comments for a two month period and the final EIA was posted online for one

year. Management acknowledged it should also have disclosed the full EIA and SEA in Spanish at that time in order to provide “*Project stakeholders with additional sources of detailed information.*” Management concluded by saying that since 2008 the Bank has “*contributed to positive developments in communication and public outreach.*”

Concerning impact on the Barranco Historical District, Management stated that “*the requirements of OP 4.11 on Physical Cultural Resources have been met*” as the Project complied with local law and institutions and the impacts on cultural resources and historical sites have been minimized. According to the Response, the National Institute of Culture (Instituto Nacional de Cultura, INC) has oversight of the Project and it is being asked for approval of the design of the bus station under construction in the Barranco District.

Concerning Project Appraisal, Management believed it had “*broadly met the requirements of the Bank’s Policy OMS 2.20 on Appraisal.*” It elaborated by stating that, while the Project fully met conceptual, economic, financial, and commercial aspects of OMS 2.20 during preparation and appraisal, the Project “*was not ready for implementation at the time of approval*” and that the assumption that outstanding issues would be resolved during implementation was “*overly optimistic.*”

Regarding Supervision, Management was of the view that Project supervision “*partially met*” the requirements of OP 13.05 (Project Supervision). Though a 2006 Quality of Supervision Assessment rated supervision as “*moderately satisfactory,*” more recent Bank efforts, particularly in light of the problems raised, have been proactive and robust.

Action Plan. The Management Response presented an Action Plan with related timeline to follow up on issues raised by the Requesters. The Action Plan proposed a traffic management study to be concluded by June 2010, active supervision of the environmental and social impacts, an ex-post environmental audit, support for dialogue and consultation with the help of an expert facilitator, continuation of technical advice to Protransporte to help the agency manage the issues raised in the Request and in the future, and supervision to ensure works in Barranco conclude satisfactorily.

Eligibility of the Requests and Board Decision

In its Eligibility Report, the Panel determined that the Request met the eligibility requirements for an investigation, noted that there were important questions of compliance and harm raised by the Request, and recommended that an investigation be carried out. In its investigation, the Panel assessed whether the Bank had complied with OP 4.01 on Environmental Assessment, OPN 11.03 on Management of Cultural Property, OMS 2.20 on Project Appraisal and OP/BP 13.05 on Project Supervision.

Context of the Request and of the Project

The District of Barranco is located 10 km south of Lima on the southern border of the Lima Central Metropolitan area. The BRT corridor transverses the District of Barranco on Avenida

Bolognesi, a previously four-lane main corridor of mixed traffic in both directions. The Project has rerouted south-bound traffic through Avenida San Martin on the west side of the District.

The District is divided by Avenida Bolognesi into two socio-economically different sections to the east and west, with the wealthier inhabitants to the west. The western sector has buildings described to be in good condition, with restoration projects converting old houses into new uses such as art galleries, cafes, etc. The eastern sector has a higher population density and lower average incomes, with buildings in poorer condition.

In 1972 the National Cultural Institute categorized the Barranco “monumental area” as a historic area with high “*architectural and urban value*.” Barranco is becoming a popular tourist attraction with night spots and day recreation. This new popularity has caused some tension between areas used for commercial and recreational purposes and calmer residential areas.

The Environmental Assessment Process, Analysis of Alternatives and Consultation

Categorization of the Project

The Environmental Assessment process includes screening projects to assign one of three categories, A, B, or C, that require an “*appropriate extent and type of EA*.” The project category is determined by the characteristics of the proposed project and its impact on the area affected by the Project. The LUTP project is classified as a Category B given that “*[a]ny possible negative environmental impacts from the project are easily predicted and can be adequately managed...*”

The Panel agrees with Management that the Project’s potentially adverse environmental impacts on human populations or environmentally important areas were not such as to warrant a “Category A” investigation. **The Panel agrees with this judgment and finds that the Project was correctly categorized as B, in compliance with OP/BP 4.01.**

The Environmental Impact Studies

The Environmental Assessment of 2003

The classification of the Project as a Category B requires the environmental assessment to examine potential negative and positive environmental impacts associated with the Project and to recommend measures to prevent, minimize, mitigate, or compensate for adverse impacts and to improve environmental performance.

During project preparation and implementation, 19 EIAs corresponding to different segments of the BRT were prepared. In 2003 a Strategic Environmental Assessment and an Environmental Impact Assessment were prepared and submitted to the Bank.

The Panel’s review of the 2003 EIA prepared for the south corridor of the Project showed the study to be a compilation of various impacts and mitigation measures. Impacts on aspects related to traffic re-routing did not include detailed traffic management studies on which to base the impact assessments. As a result, the assessments are of a very general nature with no precise indication of what streets will suffer.

Additionally, the Panel notes that the Project's impacts on cultural aspects are presented with a very poor scoping, ignoring the possible change in the character of some streets due to significant changes in traffic volume. The Panel notes that the EA is silent on potential long-term impacts of the Project on cultural property resulting from the operations of the BRT. It follows that no mitigation measures were identified to deal with these impacts.

The EA focuses on the favorable aspects of the Project, with only minor discussion of negative impacts, which are in general only vaguely identified. The Environmental Management section includes a section on recommendations for communication with affected citizens, traffic related aspects, development standards, and traffic management studies. It contains recommendations for other projects, including one focused on the reconstruction of streets affected by construction, and on urban improvement.

The Final Report of the Environmental Assessment of June 2005

The 2005 COSAC I Environmental Assessment, presented in June of that year, concluded that the Project would result in clear benefits to air quality and noise. However, traffic patterns after implementation are not described in detail and no mention is made of the impacts of re-routed traffic on the local streets of Barranco. A November 2005 Bank Mission to Lima concluded that the Project would bring clear benefits and that there was no need for revision of the Bank's position on this point.

The Engineering Studies Published in 2006 and the EIA of 2007

Several of the 2006 Engineering Studies and designs done for the COSAC corridor and stations included chapters on environmental assessment. While detailed consideration of problems during construction were considered, only general comments were made for resolving these problems in the operation phase. Related problems of re-routed traffic onto local streets in Barranco are not addressed.

The formal EIA reports for the southern part of the corridor were concluded in late 2007 and early 2008. In general, while multiple aspects and impacts are considered for various sections of the corridor, negative impacts on traffic and cultural property are given less consideration than expected positive impacts.

Findings on the Environmental Impact Studies

The Panel finds that the Environmental Impact Assessment reports related to the south corridor seem to have been carried out with acceptable diligence regarding certain items in those assessments, e.g. impact evaluations on issues such as air quality and noise, and that mitigation measures identified to deal with these impacts are adequate. In this respect the reports comply with OP 4.01 on Environmental Assessment.

The Panel finds however that while studies had an acceptable quality on the issues that directly affected construction and operation of the BRT, there was little concern and analysis of impacts beyond the busway on such issues as pedestrian flows, vehicular traffic re-routing, and economic livelihoods. The studies are also inadequate as to the analysis of the Project's

impact on the historical heritage and cultural value of Barranco and its vulnerability to significant traffic flows in the proximity of historical buildings.

The Panel also finds that scarce attention was paid to identifying and mitigating potential negative impacts of the Project on the Barranco neighborhood beyond the immediate impacts of construction and operation of the BRT, while the emphasis of the studies was overwhelmingly on the Project's benefits. **The Panel finds that the analysis of potential adverse impacts of the Project and identification of mitigation measures fall short of meeting the requirements of OP 4.01 as far as the analysis concerns the District of Barranco.** While the Panel understands the importance of the Project for the City of Lima, compliance with OP 4.01 is crucial to ensure that projects financed by the Bank are environmentally sound and sustainable, in support of informed decision making.

Analysis of Alternatives

The Requesters believe that the environmental assessment did not adequately consider alternatives to the current project design, including the Requesters' suggestion of a tunnel under Avenida Bolognesi, which in their view would successfully address traffic and other negative impacts that may result from the Project. Management argues that alternatives were analyzed during Project preparation to identify alternatives with the least impacts, in accordance with OP 4.01. Management acknowledges, however, that disclosure of studies and plans did not always meet the policy's requirements.

In its investigation, the Panel examined the EIAs prepared for the south corridor of the BRT. The Panel understands that design alternatives different from running the busway along Avenida Bolognesi were not considered, as geometric limitations imposed Avenida Bolognesi as the only possible path. Alternative designs were considered for the bus stations, and the final station design was approved by INC.

The Panel notes that the introduction of the segregated BRT corridor in Barranco along the Avenida Bolognesi as the only option available was difficult for the residents of Barranco to accept, since it had major implications both for the use of the Avenue and for the pattern of traffic within Barranco. A key point for residents was the need for a different option, namely a tunnel below Avenida Bolognesi.

Bank Management has informed the Panel that the Project is proposing to study the feasibility of a tunnel as a medium or longer term option for Barranco, taking into consideration ideas and proposals from the interested community, and in the broader context of urban revitalization. The Panel was informed by Project authorities that the tunnel option was not considered possible in the short-term for a number of technical and economic reasons. The Panel learned in meetings with Project authorities that they considered that an optimal long term solution would be the direct connection between the Via Expresa and the Panamericana highway, although this would not be financially feasible for MML for the next one or two decades. Barranco residents also told the Panel that they believed the connection with the Via Expresa to be the best solution in the long-term.

The Panel notes that a review of the environmental assessments prepared for the Project reveal that these alternatives were not studied in sufficient depth to be able to assess their technical feasibility and cost, or their merits for Barranco as compared to the selected route. It is not clear to the Panel to what extent these options were put forward for consideration in the environmental assessment. The Panel observes that attention to these alternatives as well as adequate consultations with Barranco residents during the decision-making process could have avoided the tensions and strong opposition to the Project that arose later and that resulted in the Request for Inspection to the Panel.

Consultation and Dissemination of Information

Barranco residents also claim that their concerns on the negative impacts of the project were not taken into consideration and that “*no public consultations were held*” during Project preparation and through the implementation of the Project. Management notes that after the 2003 EIA was made public, “*efforts were made to consult widely,*” though, “*these were not always fully satisfactory.*” Management agrees that the Project has not met fully the requirements of policies and procedures related to consultation and grievance mechanisms. Management agrees with the Requesters that the Barranco community was not sufficiently engaged in the consultation process, though, when community concerns became ‘apparent’ Protransporte engaged increasingly with Barranco residents. Management acknowledges that the SEA and EIA were not disclosed prior to Project appraisal and that only a summary of the environmental assessment was available.

The Project Appraisal Document (PAD) notes that information was shared and consultations carried out through focus groups, workshops and structured interviews. However, the Panel received numerous reports during its visit from residents of Barranco complaining that information about Project design was not shared during the decision-making process and thus the community did not have a chance to provide input on the design of the Metropolitano.

The Panel notes that the evidence shows that the quality of communication and outreach since 2006 has significantly improved, and that Bank Management has continually advised Protransporte on means to improve this communication and consultation process. The Panel has found in its investigation that consultation was inadequate during Project preparation and well into implementation, at least in relation to the Barranco residents. Many meetings have been held, but have systematically lacked adequate explanation or willingness to listen to claims and suggestions.

The Panel finds that dissemination of information and consultation with the affected people in Barranco failed to meet the requirements of OP 4.01, especially in the early phase of the Project and during a good part of Project implementation. Only when residents began voicing their concerns in a more organized fashion were their concerns taken into consideration and a number of actions taken to hear their views and address their concerns.

The Panel notes that this failure of consultation likely has had important consequences in the present case. The lack of adequate consultations, particularly during the critical design phase of the project, appears to have contributed to later tension and conflict about this important project for the City of Lima.

Supervision of the Assessment and Consultation Process

In the Panel's review of supervision reports, community concern (about construction works and lack of information in the southern part of the corridor) began in 2005. In 2007, Protransporte prepared a Communication Plan to inform communities about Project activities. A 2008 Bank mission acknowledged that Barranco would have a new transportation circulation pattern. At the same time, Barranco residents began to voice concerns about the construction works. Bank staff informed the Panel that no complaints from Barranco were brought to the Bank's attention until after construction began. In 2009 the Bank mission addressed Barranco issues at length and made recommendations to Protransporte to address the issues and mitigate impacts. The Panel notes that the Requesters first approached Bank Management to raise their concerns about the Project in 2008, while the Panel received the Request for Inspection in October 2009.

Mesa de Diálogo. In November 2009 the Bank launched a formal consultation process in the form of a "Mesa de Diálogo" to address communication difficulties between Barranco residents and Protransporte. However, the dialogue was effectively cancelled in February 2010, after three months of stalemate. In a letter from the facilitator to the members of the "Mesa de Diálogo," the World Bank was asked to intervene in summoning all parties to resume conversations. Management has informed the Panel that a recent consultation event with Barranco residents, including the Requesters, has taken place to discuss the results of the new traffic management study and that the new draft traffic management study will be open to comments from the community until early January 2011, and will then be submitted to the Bank.

The Panel became aware, during its visit, that both parties involved were dissatisfied with the "Mesa de Diálogo" and did not believe it worked effectively. Management told the Panel that discussions are underway to resume the "Mesa de Diálogo". A new facilitator has also been contracted.

Grievance Mechanism. The Management Response proposed the establishment of a grievance office in Barranco as a place for residents to present their complaints. During the Panel's visit, it was apparent that it was not easy to find the grievance office. **The Panel notes that this project level grievances system has the potential to be an important avenue for residents to present their grievances and have their issues addressed, but doing so effectively requires a functioning office.**

A Quality Assurance Report was conducted for the Project in 2006. The assessment noted that while supervision was "diligent" and "intensive," implementation was slow and Bank staff could have intervened more forcefully with the implementing agency to deal with management issues. The assessment also noted that there were implementation delays in the social program.

The Panel notes that a social specialist has been a member of the team since February 2009, but that for long periods during Project implementation the Project team did not benefit from the consistent presence of a team member with social expertise. **The Panel finds that supervision did not ensure that Project affected people were adequately informed and consulted on the Project and its potential impacts until the end of 2008, when problems started to emerge in Barranco as the construction of the Metropolitano progressed. The Panel finds, however,**

that since 2008, Project supervision has been more active in addressing complaints and reacting to emerging issues in compliance with Bank Policy on Project supervision.

The Environmental Approval Process

The Requesters claim that the Environmental Assessment was not approved by the correct Peruvian agency, and did not include public consultations as prescribed under Peruvian law. The Requesters also claim that the environmental certification was not approved by the Ministry of Transportation and Communication, as required by Peruvian law.

Management's Response states that since Project preparation the Bank has recognized that there were ambiguities in the national legislation with respect to the approval of Environmental Assessments. Management argues that in this context the Bank concluded that Project preparation was sound. The Response adds that when works began in 2007, the legal uncertainty continued and the Environmental Management Plans attached to the EIAs were not formally approved. The Ministry of Transport therefore requested an environmental audit of the works once they were completed.

Management believes that, *“[w]hether or not the environmental approval process failed to comply with national law would ultimately be a matter for the Peruvian legal system to decide...”*

A review of the Project preparation and appraisal documents shows that the approval of the EIA was not identified as an issue requiring particular attention. However, the approval of the environmental assessment is discussed in the supervision missions since 2005, and recurs in many Aide Memoires until the present time.

In 2009, upon a letter sent to the Bank in relation to the approval of the EIA, the Bank requested a legal opinion on this matter, which concluded that based on the legislation in force in Peru when the EIA was approved by the Municipality of Lima, the Municipality was the competent authority to grant this approval.

The Panel concurs with Management that it would be a matter for the Peruvian courts to decide whether the Municipality of Lima was the competent authority to approve the EIA based on legislation in force. The Panel finds that, as a matter of due diligence and based on OMS 2.20, this issue should have been part of the appraisal of the Project and as such reported in the PAD. This did not happen and is not in compliance with OMS 2.20. However, the Panel also notes that supervision missions discussed and raised this issue with the authorities early in the Project implementation and well before construction began. As noted above, the Bank also requested a legal opinion on the matter. The Panel finds that during implementation Management acted with due diligence in compliance with OP/BP 13.05.

Traffic and Cultural Property Issues in Barranco

The Requesters believe that increased vehicular traffic and congestion in the District of Barranco has resulted in direct harm to their neighborhood and their way of life, resulting in pollution and safety concerns and potential damage to the District's cultural resources.

Many of the complaints that the Requesters brought to the Panel's attention refer to alleged negative impacts of the Project as designed and implemented in Barranco concerning (a) the Project's impacts on vehicular traffic, (b) pedestrian traffic and socio-economic impacts, and (c) impacts on the Barranco Historic District.

(a) Project Impacts on Vehicular Traffic

The Requesters state that traffic in the District has been severely impaired by the Project, creating a chaotic and disorderly flow of public transportation and private vehicles. The Requesters claim that the Project has severely affected traffic in the Barranco District because all vehicular traffic that used to go through Avenida Bolognesi is now re-routed through the center of Barranco, causing traffic congestion in areas previously not accustomed to such high volume of traffic.

Management believes that traffic congestion in Barranco has been caused by changes in traffic patterns and slow Project implementation, and agrees with the Requesters that Barranco has been affected by this more than other districts in Lima. As provided under the Project, two lanes of Avenida Bolognesi would be exclusively used by buses, while two lanes of general traffic would be left going northbound.

The impacts of the Project on traffic conditions in the project area in general and the District of Barranco specifically were evaluated in the Traffic Management Study carried out in 2005. The Panel has reviewed this Study and finds that it represents several weaknesses, including that it failed to take into account a critical view of problems and challenges that the introduction of the BRT corridor could raise.

The 2005 Traffic Study offered the opportunity to evaluate the permanent impacts of the Project on traffic patterns in Barranco and to devise adequate measures to mitigate them. The Panel finds however that the 2005 Traffic Study contains a number of weaknesses in its analysis, and as a result falls short of meeting the requirements of OP 4.01, especially with respect to the depth of the evaluation of impacts the Project may cause on traffic conditions in Barranco.

The traffic re-routing pattern recommended in the 2005 Traffic Study proposed a re-routing of southbound traffic, which was previously using Avenida Bolognesi, onto Avenida Grau, the direction of which would be reversed from northbound to southbound.

The Panel notes that at some point in time there was a decision not to implement the recommendation of the 2005 Traffic Study and to divert southbound traffic to the historic center of Barranco through a different avenue, Avenida San Martín. The reasons for the change are not

clearly stated in any document. In addition, the Panel found no analysis of the traffic pattern re-routing that was implemented and that remains in place, which differs from that recommended by the 2005 Traffic Study, and of its impacts on the neighborhood traffic. In meetings with municipal authorities, the Panel was informed that the solution proposed by the 2005 Traffic Study was changed because of opposition by some residents. Others have told the Panel that the municipal authorities were not satisfied with the solution recommended in the 2005 Study.

The Panel notes that re-routing the general North-South traffic through Barranco's west side represented a major change in the organization of traffic within Barranco, significantly changing the character of some streets, due to much higher traffic loads. This is of special importance given the classification of Barranco as a historical district, and its particular role as a tourist and recreation district in Metropolitan Lima. It seems evident to the Panel that some aspects of the traffic problem were not properly studied before implementation.

It is the view of the Panel's experts that the traffic re-routing alternative proposed in the 2005 Traffic Study is likely to respond better to the concerns expressed by the Requesters and other Barranco residents than the solution that was implemented and that remains in place. **The Panel found no record indicating when or why the 2005 Plan was changed to adopt the existing solution (via Avenida San Martin rather than Avenida Grau), nor did it find any analysis of this new alternative and its impacts. This is not in compliance with OP 4.01 on Environmental Assessment.**

(b) Pedestrian traffic and socio-economic impacts

An adequate pedestrian environment is required by the resident population of Barranco, especially school children, and also as a setting for those who arrive to experience its historic and environmental endowments. Construction of the project has resulted in some instances in the loss of access and livelihoods, which has impacted the socio-economic environment of the Barranco District.

Requesters' claims. The Requesters described how, in their view, the lack of an adequate environmental and socio-economic analysis of the Project contributed to several negative socio-economic impacts in Barranco. For example, the Requesters claim that the traditional social and economic exchange between the Districts of Barranco and Surco has been interrupted. They stated that the Metropolitano practically acts as a "wall" between the east and the west sides of the District, making pedestrian crossing between the two sides difficult and dangerous and limiting communication and access to basic services. In their view, this would be particularly harmful for lower income residents of the eastern side.

Management Response. Management's position is that the Project will reduce rather than exacerbate the barrier effect created by Avenida Bolognesi, because the number of buses will be lower than before and crossing the avenue will be safer both for pedestrians and cars.

Connections between neighborhoods. One of the Project impacts relates to the connections of vehicular traffic between Barranco and Surco, which are, as a result of the Project, difficult from west (Barranco) to east (Surco) because of the choices made regarding one-way streets.

It is the Panel's view, however, that traffic safety on Avenida Bolognesi will be better with the Project than without it, because of a combination of factors, including a significant reduction in traffic flows in the BRT corridor as compared to general traffic and the fact that general traffic will flow in only one direction. Safety will further improve if, as planned, a modern traffic light system is implemented. The Panel's experts note that Avenida Bolognesi will be easier and safer to cross, and at more locations, than before the Project, since traffic in the BRT lanes will not be continuous and will come from only a single direction, and there will be crossing signals for the passengers at both ends of the BRT stations.

Sidewalks and Related Matters. During its visit, the Panel observed that access to homes and businesses on the west side of Avenida Bolognesi is permissible with a mixed-use lane for pedestrians and (slowly moving) cars, which seems to meet the needs of residents. However, passage on the east side of Avenida Bolognesi is now rather narrow. The Panel could not find Project designs that explored ways to address this problem, such as the possibility of allowing a small additional width on the east sidewalks without sacrificing the west mixed use lanes. **The fact that this awkward design was not reviewed with the community and does not appear in the principal reports of the project documentation is not consistent with OP 4.01 on Environmental Assessment.**

Sidewalk conditions on Avenida Bolognesi need further attention. There are elements of the pedestrian ways, unfortunately on the route used by school children, where the sidewalks are very narrow and nearly completely obstructed by utility poles or trees, and in an isolated case at a critical location for school children where the curb is very high above the street.

Sidewalk conditions are of considerable concern for the community. As noted above, it seems that solutions were adopted on site rather than after a careful review of possible alternatives. In conversation with the residents it became clear that the community never saw drawings at this level, which would have been very important to their understanding of the conditions of pedestrian movement after construction. This constitutes an important lapse in communication with the community, and is not in compliance with OP/BP 13.05 and OP 4.01.

Supervision of the Traffic Problem in Barranco. The Panel's review of the supervision reports regarding regular missions to the Project area showed that there was no mention of the change in traffic pattern, from the solution proposed in the 2005 Traffic Study to the current re-routing through the historical center of Barranco. Supervision reports do not indicate whether an analysis of the impacts of the new traffic pattern was made or proposed during the missions. The Panel also notes that it is still not clear when or why the decision to implement the current traffic pattern was taken by Project authorities.

Neither supervision reports nor Bank staff could provide clarification on this decision. However, the Panel notes that, in interviews with the Panel, Bank Staff informed the Panel that during supervision missions they had realized that the traffic pattern implemented was not the one recommended in the 2005 Study, and had raised this issue in a number of instances with the implementing agency, but to no avail.

The Panel finds that supervision of Project activities in the District of Barranco was not consistently up to speed with events and circumstances on the ground between 2007 (when construction works started and traffic re-routing became necessary) and 2009, when Barranco residents started to raise their complaints.

However, the Panel also finds that once problems were identified in 2009 as a result of residents' complaints and related monitoring of the situation in the context of supervision missions, supervision activities strengthened and a number of actions were taken, including contracting a traffic specialist and proposing a new traffic management study. The Panel finds that this is in compliance with OP 13.05 on Project Supervision, which requires Bank Staff to identify problems promptly as they arise and to recommend ways to solve them, as well as to recommend changes in the project concept as appropriate as the project evolves.

The Panel also notes that Bank Management facilitated the creation of a round table ("Mesa de Diálogo"), where the traffic problem was discussed between Protransporte and the residents of Barranco, in order to find short and long-term solutions to this issue. The Panel finds that this meets the supervision requirements of OP 13.05.

The New Traffic Management Study. The Management Response includes proposed steps to address the concerns presented by the Requesters. The first of these steps is a traffic management study *"encompassing such aspects as the management of road closures and detours, the synchronization of traffic signals, and the operations of intersections in order to improve traffic flow and enhance road safety..."* A draft of the traffic management study has been completed and at the time the Report went to press Bank Management was awaiting community comment on the draft.

The Panel commends Management for the efforts it made to address the concerns of the Requesters regarding the traffic conditions in Barranco by proposing, among other things, a new traffic management study. According to its Terms of Reference (TOR), the study would analyze and compare different alternatives, including an alternative proposed by residents of Barranco. The Panel finds that Management's supervision of the Project, with respect to the efforts made to address the traffic problem, is currently in compliance with the requirement of the Bank policy on Project Supervision.

The Panel is also encouraged by recent indications from Management that the Project now is committed to reviewing not only short-term but also medium/longer term options to address these issues and shortcomings, including the options noted above. The Panel notes the importance of this review - and of the engagement by affected people - to the community in Barranco. In this regard, the Panel notes that the Mesa de Diálogo, which was interrupted in February 2010, is to be reconvened in 2011 with a new facilitator.

(c) Cultural Property Issues: Impact on the Barranco Historic Architectural District

Requesters' claims. The Requesters argue that southbound traffic that used to run through Avenida Bolognesi and was then re-routed through the Barranco Historic District and brought excessive vehicles onto residential roads. The Requesters also believe that the direct and indirect

impacts of the works have caused irreparable harm to the architectural heritage of the District, which was declared a historic district by the National Institute of Culture (INC).

Management Response. Management believes that the Project “*has not caused irreparable harm to the architectural heritage of the District.*” The Environmental Assessment and the Strategic Environmental Assessment addressed the possible impacts to physical cultural resources for both downtown Lima and Barranco and suggested measures to protect these cultural resources, including requiring INC approval of Project designs. Management notes that the INC has been directly involved in the Project because works with potential impacts on the cultural heritage of Peru have to be approved by the INC. The Response adds that Bank supervision has made sure that Project activities respect the architectural heritage of Barranco.

The 2005 Traffic Management Study and Plan provides a map of historic properties that includes at least 30 percent of the all the properties in the District, but does not clarify which ones are important. The Panel has found no adequate analysis of the historic neighborhood or monuments or of the potential impacts of the Project on them. As noted above, the SEA and EA mention that the Project will have an impact but go no further in evaluating the nature and magnitude of the impacts. The SEA proposes that a study be carried out to address impacts in the historic area. **To the Panel’s knowledge, such a detailed study related to Barranco has yet to be carried out. The Panel finds that this is not in compliance with OPN 11.03 on Physical Cultural Resources.**

The Panel notes that the lack of adequate studies of the impact of the Project on the cultural resources of Barranco is a serious matter, as high traffic volume crossing the District may cause permanent negative impacts to its protected historic area. Not only does the current traffic pattern increase traffic in the area significantly, but the additional traffic would also be through-traffic, not neighborhood traffic, and as a result faster and more aggressive, mixed with neighborhood vehicular and pedestrian traffic. The Panel notes that the resulting traffic would reduce the livability of those avenues, at the same time raising their accessibility (and monetary value)).

In the opinion of the Panel, the Requesters’ concern that the increased traffic through Avenida San Martin would cause a loss of quality of the historic area is well founded. The Panel finds that the increase in traffic, leading to congestion through the community, was not adequately considered in assessing the impacts of the Project on the historic area. In addition, as noted above, the current traffic pattern was not the subject of an analysis of impacts as would be required under Bank policies. The Panel finds that diversion of traffic through Avenida San Martin, rather than as recommended by the 2005 Traffic Study, was carried out on an ad-hoc basis, without consultation with the interested community, without an analysis of the impacts on the cultural property of Barranco, and without mitigation measures. **The Panel also finds that the EAs prepared under the Project do not mention the potential problems associated with the impacts of re-routed traffic on buildings and public places of interest.**

Systemic Issues and Lesson Learned

The Challenges of Addressing Adverse Impacts in High Priority and Generally Beneficial Infrastructure Projects

BRT systems allow cities to provide a high quality public transport system at reduced costs, with significant economic, social and environmental benefits. BRT projects therefore tend to be highly visible, and politically prized. The high visibility and generally beneficial nature of BRT projects like the Metropolitano de Lima create pressures that can challenge the Bank in its work to ensure that possible adverse impacts are properly assessed and its safeguard policies are properly implemented during both design and implementation.

In the case of the Metropolitano de Lima, the overall tenor of the EA seemed to have been influenced by the sense that the overall social, environmental and economic benefits far outweighed the harms, which were regarded as temporary and limited to the construction phase. While the Panel's investigation was limited to only one segment of the bus corridor, the EA seemed to argue overall that the BRT would bring many benefits and only minor negative impacts of various natures, in general only vaguely identified. Indeed, recognition of the significant economic, social and environmental benefits of the Project appears to have had the effect of making the analysis downplay possible adverse effects to one of the affected communities, Barranco, and thus not fully fulfill one of the EA's key objectives – to help prevent or reduce possible future harm in specific locations through the development of appropriate plans to avoid, mitigate or compensate for such adverse effects. This in turn meant that more time and effort had to be invested in the later stages of the Project in 'curative' efforts, which could have been avoided if more attention had been given to 'preventive' efforts in the early stages of the Project – particularly in those parts of the city such as Barranco that had a difficult geography and where potential future adverse effects should not have been difficult to foresee.

Similar attitudes seem to have prevailed during the implementation stage, at least initially. Two key beliefs seem to have dominated the Project, and increasingly so as the Project was delayed: that the Project was very important for Lima and its transport system and would create immense benefits, and that some opposition from the population was to be expected during construction but would quickly subside after the system started operating. From these two premises, the overall approach seemed to give priority to speed of execution, with little attention to external factors that might cause a delay. In addition, during both design and implementation, the politicization of the Project because of its popular value became a significant factor, and indeed the Panel was informed by many sources during its visit that Project-related decisions were often taken outside of the hands of those directly responsible for the Project. All this made supervision by the Bank extra challenging, and supervision resources may have not been adequate to address these challenges.

Professional and Institutional Capacity to Support Project Objectives

Several Panel investigations of other projects have found important shortcomings in meeting Bank policy requirements to properly assess and support the capacity of the borrower and the implementing body, in support of project objectives. While this investigation has not examined

these issues in detail, the Panel observes that BRT systems are complex technical and social systems that need to be planned and managed carefully, and require effective urban transport institutions with skilled staff. Importantly, the skills required for the design and execution of BRT systems include those needed not only to address technical issues of engineering design but also to deal with social and environmental matters, such as stakeholder analysis, consultation with affected parties, and analysis of potential adverse social and environmental impacts.

During its visit, the Panel was informed by a range of local stakeholders that professional and institutional capacity in urban transport management remains a challenge in their country. Specifically, the Panel was informed that there is limited capacity for detailed implementation of complex systems such as the BRT and for attention to broader issues of environmental, social and historical/cultural aspects of sustainable urban transportation management. The Management Response also acknowledges that implementation and coordination capacity of Project agencies, especially in the environmental social management areas, needed significant strengthening at the time of Project initiation. Under these conditions, it was a challenge simply to get the technical job done. Not surprisingly, compliance with Bank safeguard policies proved problematic.

Recurring Patterns

One recurrent finding from other Panel investigations, and which appears to be an underlying problem in this case, relates to shortcomings in delineating a Project's area of influence. As discussed in the 2009 Report, 'The Inspection Panel at 15 Years', in several Projects investigated by the Panel, one or more specific Project-affected communities seemed to 'fall off the radar screen', with the result that the negative impacts of the Project on those communities were overlooked and not properly addressed as part of the Project's harm avoidance and mitigation elements. While the Panel's investigation was limited only to the one segment of the bus corridor in the District of Barranco, the Panel's findings suggest that an overly narrow delineation appears to have been a factor in this Project too. As detailed in the Panel's report, little attention was paid to assessing impacts and identifying harm that might take place beyond the bus corridor itself as a result of changes in traffic patterns, a shortcoming that had particular implications for the Barranco District, given its difficult geography and the fact that the Project would cause significant traffic rerouting. Had the Barranco community been 'on the radar screen' from the outset, later tension and conflict about this project could have been avoided and there would have been greater opportunities to avoid or mitigate harms.

Several other findings from this investigation resonate with Panel findings in other investigations. For example, the Panel's finding in this Project that supervision related to the District of Barranco was not consistently up to speed with events until Barranco residents started to raise their complaints, is similar to the Panel's findings in its investigation of the Ghana UESP II and other Projects relating to Bank failures to identify and adequately respond to issues and problems as they emerged. Also, the Panel's findings relating to dissemination of information and consultation with the affected people in Barranco, especially in the early phases of the Project, is consistent with a recurrent set of findings in Panel investigations related to noncompliance with Bank policy requirements on consultation and disclosure of information.

Chapter 1: Introduction and Context

A. Introduction

1. On October 1, 2009, the Inspection Panel received a Request for Inspection (the “Request”) related to the Peru: Lima Urban Transport Project (the “Project”). The Request was submitted by residents of the District of Barranco within the Lima Metropolitan area (the Requesters), who claim they are suffering and will suffer harm as a result of the “*deficiencias and omissions*” of the World Bank in the design and implementation of the Project as it relates specifically to Barranco.² The Project supports the construction of a bus rapid-transit system (BRT) through the City of Lima. The busway crosses the District of Barranco on Avenida Bolognesi, the District’s major avenue.
2. This Report presents the results of the Panel’s investigation regarding the different issues the Requesters raised in the Request for Inspection. The focus of the Panel’s investigation has been to establish whether the Bank complied with its own policies and procedures in the design, appraisal, and implementation of the Project, and whether, if instances of noncompliance were found, they caused, or were likely to cause, the harm or potential harm alleged by the Requesters and the people they represent. Key issues of compliance are considered in Chapters Two and Three, including policies relevant to this investigation: OMS 2.20 Project Appraisal,³ OP 4.01 Environmental Assessment,⁴ OPN 11.03 Management of Cultural Property and OP 13.05 Project Supervision.⁵
3. **Organization of the Report.** The Panel’s report is presented in four chapters. Chapter One reviews the procedural background leading to the investigation, describes the Project, summarizes both the claims of the Requesters and the Response of Bank Management to these claims, notes the Panel’s investigation process and key questions considered, and introduces the context surrounding the Request for Inspection, namely the District of Barranco. Chapter Two analyzes the Requesters’ claims in relation to the environmental assessment process, in particular the analysis of alternatives and consultations and the disclosure of information to affected communities. Chapter Three examines issues related to the impacts of the Project on traffic in Barranco and the related impacts on the cultural heritage of the District. Chapter Four discusses systemic issues of broader relevance to Bank operations.
4. The Requesters reside in both the eastern and western side of the newly constructed busway on Avenida Bolognesi in Barranco. They and other affected people raise issues related both to the design and implementation of the Project, and express concerns about what they believe will be not only temporary, but longer-term adverse impacts that will remain after the BRT becomes operational. In general, they claim that the potential negative impacts of the Project in the District of Barranco were not adequately analyzed and mitigation measures not

² The District of Barranco will be referred to in this Report interchangeably as the “District” or “Barranco.”

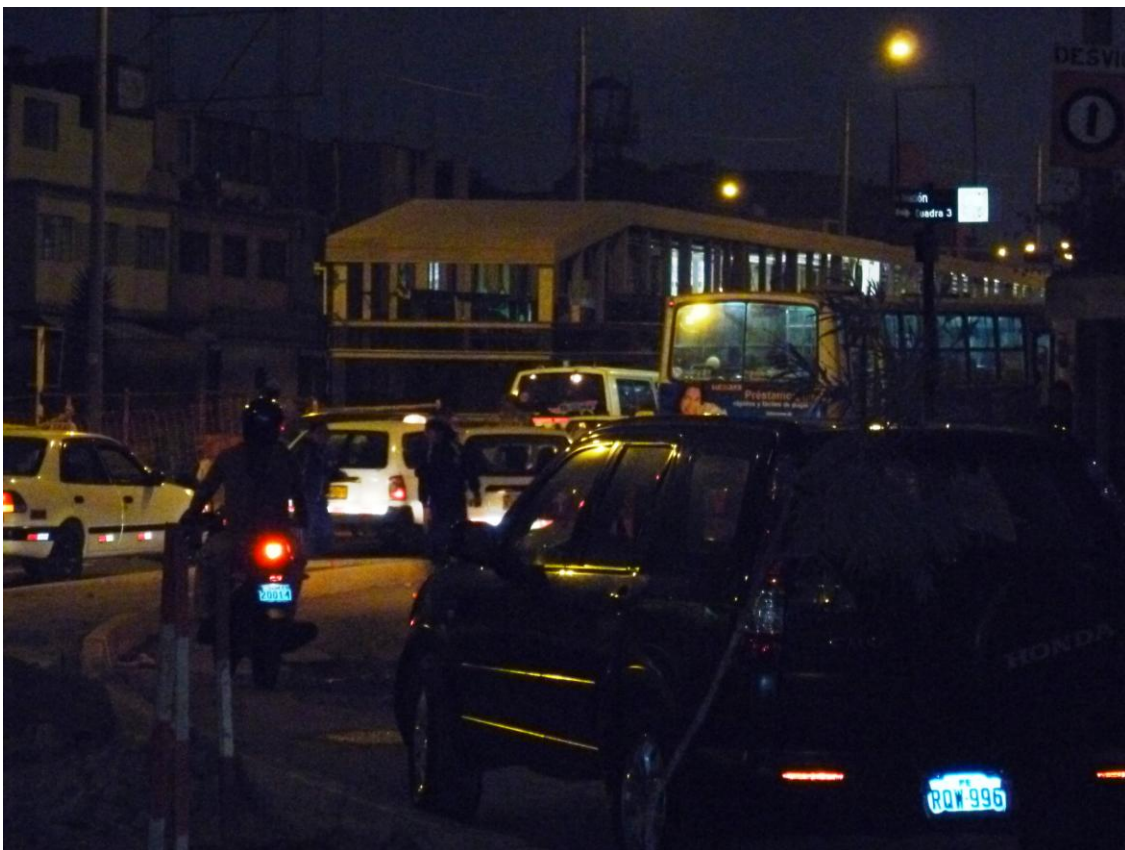
³ Project Appraisal, OMS 2.20.

⁴ Environmental Assessment, OP 4.01.

⁵ Project Supervision, OP 13.05.

properly identified. In particular, they state that the traffic that was permanently re-routed from Avenida Bolognesi, where the buses will run through the center of Barranco, is posing great danger to the District's historical and "monumental" heritage and deteriorating the District's quality of life because of very high volume of traffic and pollution. They believe that this situation is the result of a flawed impact assessment and inadequate mitigation plan. In this context, the Requesters also complain that no timely information about the Project was provided to affected people, and especially that consultations were not carried out with residents of Barranco. The Requesters argue that, as a result, they could not provide their inputs into a decision-making process that deeply affected their own district, and their views not only on the design of the corridor itself but also on impacts of the Project on traffic and historical heritage were disregarded.

Picture 1: Traffic Congestion in the District of Barranco



5. The Panel notes the key importance of the Urban Transport Project for the City of Lima and commends Management for supporting this vital sector despite the long lead time involved. During its visits to Lima, the Panel witnessed the high traffic volume in the city and the long commuting times between various locations, and observed that all parties involved, including the Requesters, underscored the urgent need to improve transport conditions in Lima and the importance of the Bus Rapid Transit system (BRT) for the City (see Box 1). The Report therefore discusses the fundamental premises on which the Project came about, while at the same time addressing and analyzing the concerns of some of the people who are and will be affected by the Project, in the context of the need for the Bank to comply with its operational

policies and procedures, so as to ensure that World Bank-financed projects are not designed and implemented at high environmental and social costs for communities affected by it, and that communities share in the benefits of these projects.

Box 1: Bus Rapid Transit Systems in Latina America and Around the World

The root for the BRT concept was the designation of bus lanes, where access was restricted to buses in order to improve their average speed and regularity, mostly in radial lines. It is widely recognized that the first actual extensive deployment of this concept was in Curitiba, Brazil. There, the features of busways and feeder services were introduced in the 1970s, and the decisive upgrade in the 1980s (including prepayment, level access and large buses with multiple doors, effectively transforming bus stops into transit stations, which allowed a dramatic increased of productivity of the entry / exit operations). Currently, approximately one hundred BRT systems are in operation across the world, with a similar number in planning or under development.

BRT has been defined as “a rapid mode of transportation that can combine the quality of rail transit and the flexibility of buses.” Because of varying local constraints and objectives, the concept has been translated into reality with a certain diversity of characteristics. But there is much more to a proper BRT system than a segregated right of way and quick entry and exit of passengers -- other essential features include rapid and frequent services, stations that are secure and comfortable, high quality information systems, and strong integration of its routes and corridors into an overall public transport system. In its 30 years of existence, the BRT concept has redefined the mobility outputs achievable per unit of investment cost: it delivers performances similar to those of metro systems at 10% to 15% of the cost, and with less time investment.

Because of differences in physical conditions, such as street width and the way that other bus services are integrated into the BRT system, there are often differences in physical solutions, both between cities and across different corridors in the same city. Operational solutions can also differ from one system to another.

Despite the obvious advantages of BRT systems, most of them experience difficult moments before starting and in initial operations as a result of poor institutional capacity, insufficient understanding of requirements for proper performance, opposition from incumbent operators, and political bickering. And because political mandates have a sharp deadline, quite often projects cut corners to meet deadlines.

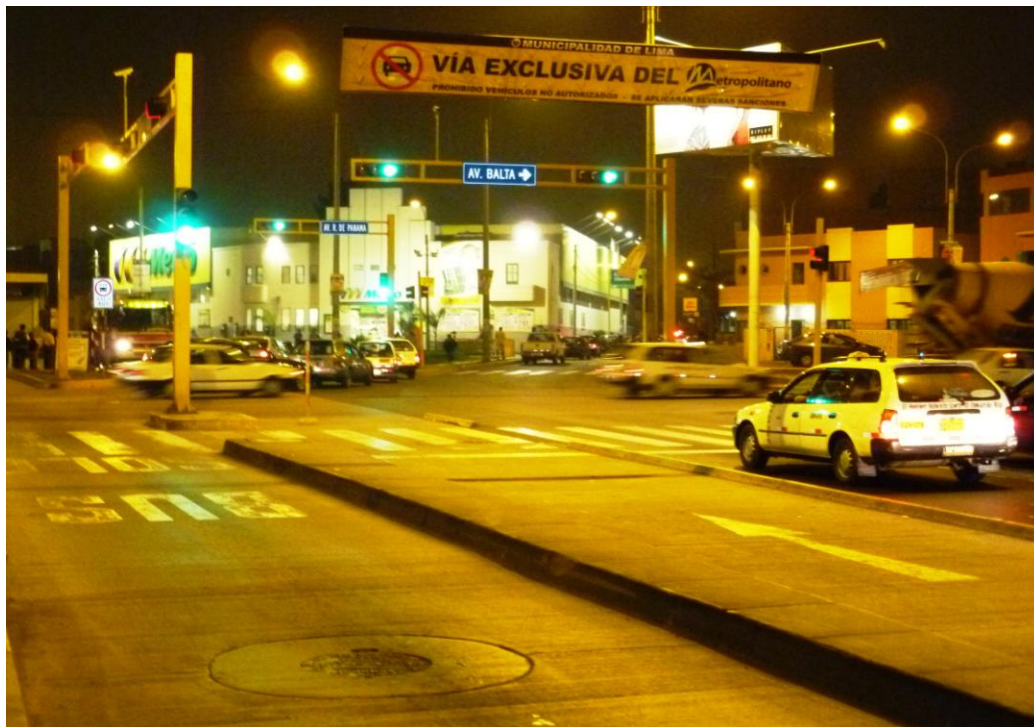
Worldwide experience in the last 20 years suggests that, while it is possible to plan and operate bus-based systems for a wide range of demand levels at a fraction of the cost, the transition from the previous public transport system to a new one with a strong BRT presence is a difficult matter. Typical challenges include traveler habits and the interests of incumbent operators and those of residents and shopkeepers affected by construction or by changes in traffic streams, with the corresponding impacts on access to property, noise, and fumes. These challenges and the time needed for successful completion can be grossly underestimated. Experience suggests that a careful stakeholder analysis at the launch of the project (and its periodic repetition as events unfold) is a necessary condition for good institutional design and proper handling of all matters related to conciliation of divergent interests.

Overall, the emergence of the BRT concept over the last 20 years has significantly reduced the costs of providing a high quality public transport system in many cities, with significant economic, social and environmental benefits. Nevertheless, BRT systems are complex technical and social systems that have to be carefully planned and deployed with serious attention not only to the technical details but to the interests of affected parties and the potential for adverse social and environmental impacts.

B. Project Objectives, Context and Components

6. The Peru: Lima Urban Transport Project (Peru: LUTP) was approved by the Board of Directors in June 2004 and became effective in December 2004 with the objective of *“assisting 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.”*⁶
7. **Lima Urban Transport Project Description.** The Project financed a first phase of an integrated mass rapid transport system, which included a basic network of segregated high capacity bus corridors (Corredor Segregado de Alta Capacidad, COSAC) of 28.6 km, from the Independencia District in the north of Lima, to the Chorrillos District in the south. The basic high capacity network consists of bus corridors and uses existing road corridors, while bus-stops and feeder-trunk route transfer terminals were newly constructed. Additionally, the projects constructed 36 bus stops, 2 terminals at the north and south, and 2 parking and maintenance areas.⁷ The Closing Date was originally scheduled for June 30, 2009 but was extended by one year. The Project closed on June 30, 2010.

Picture 2: Intersection of Avenidas Balta and Panama with BRT Lanes



⁶ Project Appraisal Document (PAD), p. 3.

⁷ PAD, p. 101.

8. **Project Components.** The Project is comprised of six Project components: 1) Mobility and Environmental Improvements (US\$ 37.94 million IBRD); 2) Social Mobility and Community Participation (US\$1.63 million IBRD); 3) Institutional Strengthening (US\$ 1.5 million IBRD); 4) Studies and Construction Supervision (US\$ 3, 48 million IBRD); 5) Program Administration (financed exclusively with counterpart funds), 6) Grade Separation of Plaza Grau (financed exclusively with counterpart funds).
9. **Responsibility for Implementation.** Protransporte Metropolitan Institute of Lima (Instituto Metropolitano Protransporte de Lima, Protransporte), an entity established in 2002 under the jurisdiction of the MML, is responsible for Project implementation. A Project Implementation Unit within Protransporte is in charge of day-to-day management and execution of the Project. The GEF component is managed by the National Environment Fund (Fondo Nacional Ambiental, FONAM).
10. **Financing.** The total Project cost is US\$ 141.88 million with IBRD and Inter-American Development Bank financing US\$ 45 million each, GEF providing a Grant of US\$ 7.93 million, and the Metropolitan Municipality of Lima (MML) providing US\$ 43.95 million.
11. **Segment of the Bus Corridor in Barranco.** The Project includes a bus corridor in Barranco, a coastal district located in the south-east of Lima between the relatively wealthier Miraflores District and the relatively low-income Chorillos District, where the bus route ends. Barranco was designated a historical district by the National Institute of Culture in 1972.⁸
12. The bus corridor runs through Barranco on Avenida Bolognesi, a former 4-lane avenue that connects Barranco with the center of Lima.⁹ Two of the avenue's former lanes have been converted for the busway. The remaining two lanes on Avenida Bolognesi can be used by vehicles going in a northbound direction, and the *“southbound car lanes have been permanently rerouted through the west side of the District.”*¹⁰

⁸ Barranco is described as tranquil and bohemian in tourism guides; Project documents refer to the District as suffering from traffic congestion.

⁹ Management Response – Request for Inspection of the Peru: Lima Urban Transport Project (IBRD Loan 7209-PE and GEF TF No. 052856), November 12, 2009, p. 3-4.

¹⁰ Management Response, p. 3-4.

Picture 3: Avenida Bolognesi with Northbound Traffic and BRT Lanes



C. The Requesters' Complaint.

13. **Barranco.** The Request relates specifically to the segment of the bus corridor in Barranco District, and not the Project as a whole. The Requesters, who as noted earlier all live in the Barranco District, claim that they are suffering harm as a result of the “*deficiencies and omissions of the World Bank in the Project design and implementation.*”
14. The Request identifies the most serious harms that they believe were caused by the Bank’s omissions in following its own policies. Overall, the Requesters believe they have been harmed because the Environmental Assessment for the Project did not include environmental management plans or any plans to mitigate negative environmental impacts, and consultations about the Project were inadequate. In the Requesters’ view, the Project and the permanent rerouting of traffic it has required has severely affected traffic in Barranco, leading to health and safety concerns, the deterioration in the conservation of the historic area of Barranco, and adverse social and economic impacts. Specifically, they list the following harms:
15. **Environmental Assessment.** The Environmental Impact Assessment, which was not approved by the competent authority, the Ministry of Transportation and Telecommunications (MTC), and where work began without securing the necessary environmental certification, did not include environmental management plans nor any plans to mitigate negative environmental impacts;

16. **Consultations.** Consultations were not carried out in accordance with Peruvian legislation and District residents remain uninformed about the Project;
17. **Traffic Conditions.** Construction of the busway severely affected traffic and pedestrian safety in the Barranco District as construction did not follow adequate traffic management or environmental management plans and residents were not kept informed about project-related developments. As a result, quality of life of the residents suffered due to traffic congestion and a higher risk of accidents;
18. **Impact on Historical District.** The residential character of the Barranco District, its socio-cultural dynamics, and the conservation of the historic area of the District have deteriorated as a result of the Project. The architectural heritage of the District has suffered “*irreparable*” harm;
19. **Economic Activity.** The traditional social and economic exchange between the Districts of Barranco and Surco has been interrupted.
20. According to the Requesters, the harm that the residents of Barranco and the District itself are suffering is of a permanent nature and bound to remain even when the bus system is operational. They further state that the options proposed thus far by Project authorities to solve their concerns do not truly address the problems.
21. The Request includes a list of letters the Requesters addressed to national authorities and the World Bank to raise their concerns. They claim that their concerns about the negative impacts of the Project in the Barranco District were not taken into consideration. These negative impacts, they reiterate, were also not taken into account in the Environmental Assessment.
22. The Requesters point out that the involvement of the World Bank and the Inter-American Development Bank led the Municipality of Metropolitan Lima (MML)¹¹ to agree to organize a consultation to discuss these problems. The Requesters add, however, that this consultation had not yet taken place at the time that they were writing their Request. Moreover, they state that responses they received from Management, though received in a timely manner, highlight the future benefits of the Project without taking into consideration the existing negative impacts.

D. Management Response

23. **Context.** The Management Response provides an overview of how traffic conditions in Lima have deteriorated as a result of an expanding population, emphasizing that the city’s poorest residents residing on the periphery suffer the most because of the time and effort it takes to travel in this congested city.¹² Management states that Lima has seen a 195% increase in

¹¹ The Municipality of Metropolitan Lima (MML) is the borrowing institution as agreed in the Loan Agreement between the Municipalidad de Lima and the International Bank for Reconstruction and Development, June 2, 2004.

¹² According to the PAD, Peru’s trade liberalization and economic recovery measures between 1992-93 influenced the shift towards the privatization and deregulation of the transport sector. These measures in addition to lifting the

vehicles since the 1990s with another 37% increase expected by the end of 2009. This increase, coupled with a “*lightly regulated*” system of public transport has led to “*endemic*” traffic congestion even though 82.5% of all trips are by public transport. Lima’s air quality, according to Management, is among the worst in Latin America.

24. Management believes Lima’s size and economic growth imperatives require a mass rapid transit system such as the Metropolitano, as the Project is known, which is patterned upon Bogota’s TransMilenio. The Metropolitano is the first line in the city’s Bus Rapid Transit system and it will run north-south, parallel to the coast, for 28.6 kilometers. The buses, fueled by compressed natural gas, will operate along segregated busways and are expected to service 600,000 passengers on a typical weekday, including persons with disabilities, who will access them from 35 stations.
25. **Barranco District.** The Project includes a bus corridor in Barranco, a coastal district located in the southeast of Lima between the relatively wealthier Miraflores District and the relatively low-income Chorillos District, where the bus route ends. The bus corridor runs through Barranco on Avenida Bolognesi, a former 4-lane avenue, and two of the avenue’s former lanes have been converted for the busway.
26. Management explains that this alignment was chosen “*because the avenue was already a major public transport corridor*” and only two lanes were recommended for busways because of the narrowness of the corridor and the “*desire to avoid expropriation and resettlement*” in its historic area. Management believes that Barranco’s traffic problems are “*in large part unrelated to the Metropolitano*” and are due to the increase in vehicular traffic in general and the existence of commercial and high rise buildings in the District.¹³ Management states that the “*Metropolitano is expected to improve the transport conditions in Barranco once it becomes operational.*”¹⁴
27. Management does acknowledge, however, that the construction phase of the Project “*exacerbated traffic problems in Barranco.*” In Management’s view, this was because of the re-routing of traffic away from Avenida Bolognesi onto other streets, the decision by Protransporte to maintain the southbound re-routing as permanent, and the lack of synchronization of the traffic signals. However, Management believes traffic conditions in Barranco will improve once the Metropolitano has become operational.
28. **Traffic Management.** Management accepts that OP 4.01’s (Environmental Assessment) requirements regarding mitigation of “*residual adverse impacts has not been fully met*” because “*some measures designed to mitigate temporary increases in congestion, such as installation of traffic signals, were poorly implemented.*” Moreover, Management acknowledges that “*informed consultation with concerned groups was not always implemented satisfactorily and as a result some groups lacked proper understanding of the*

imports ban on vehicle imports and the layoff of public sector workers, impacted the public transport sector and between 1990 and 1999, the amount of motorized vehicles in the city doubled and “the trips in public transport units decreased from 89% to 81%” PAD p. 7

¹³ Management Response, p. 4.

¹⁴ Management Response, p. 5.

Project scope.” However, Management believes it has met OP 4.01’s requirements relating to traffic management measures and assessment of alternatives. Management also agrees with Requesters that *“the Project has partially contributed to traffic congestion in Barranco”* and the fact that Project implementation has been slower than expected has not helped the situation.¹⁵ Management concludes by noting that though most of the *“negative impacts caused by the Project are temporary”* permanent negative impacts will not be known until the Project is fully operational.¹⁶

29. **Environmental Assessment.** Management states that *“requirements of the Bank’s Operational Policy on Environmental Assessment, OP 4.01, have not been fully met.”*¹⁷ Management believes it has *“met the requirements of OP 4.01 during preparation and appraisal”* but *“acknowledges that disclosure of relevant studies and plans did not always meet the policy’s requirements.”* Management also shows *“institutional capacity for environmental and social management was insufficiently developed at the time of Project approval”* and *“the Bank team could have intervened more forcefully”* to promote institutional strengthening. The Project was categorized as Category B for purposes of Environmental Assessment as studies revealed impacts to be localized and temporary.
30. Management believes the question of whether the environmental approval process complied with national law is a matter for the Peruvian legal system to decide if a case is formally submitted. It believes that the Bank met OP 4.01’s requirement that a Bank-financed project *“take into account ... national legislation”* (OP 4.01, paragraph 3) and notes that the Bank was aware, during appraisal, that the Peruvian legal framework for EIA approval was *“unclear.”* The Bank concluded, while *“recognizing the ambiguity in national legislation,”* that *“Project preparation was sound and that local processes had been proper.”* Management explains that the ambiguity was a result of the fact that, while the relevant Law 27446 was approved in April 2001, its corresponding regulations were not issued until September 2009, thus hampering the implementation of the Law.¹⁸ The legal ambiguity regarding who should approve EIAs and the subsequent corridor-specific Environment Management Plans (EMPs) continued during Project implementation and when construction began in 2007.¹⁹
31. **Consultations.** Management agrees that *“the Project has not met fully the requirements of policies and procedures related to consultations and grievance mechanisms.”*²⁰ It states that though efforts were made to *“consult widely”* on environmental analyses, *“these were not always fully satisfactory in terms of prior information, disclosure, and follow-up engagement with concerned stakeholders.”* Management does, however, state that local consultations on the Strategic Environmental Assessment (SEA) and draft EIA were held, focus groups were established, the draft EIA was posted online for comments for a two month period and the final EIA was posted online for one year. And though the Bank’s Infoshop disclosed the

¹⁵ Management Response, p. 9.

¹⁶ Management Response, p. 11.

¹⁷ Management Response, p. 27.

¹⁸ Management Response, footnote 8, p. 13.

¹⁹ Management Response, p. 13.

²⁰ Management Response, p. 14.

English language Executive Summary of the EIA prior to Project appraisal, Management feels it should also have disclosed the full EIA and SEA in Spanish at that time as *“this disclosure would have provided Project stakeholders with additional sources of detailed information.”*²¹ Management concludes by saying that *“actions taken by the Bank since 2008 contributed to positive developments in communication and public outreach.”*²²

32. Management believes the question of whether consultations were held according to national law is a matter for the Peruvian judicial system to decide if a case is brought before it.
33. **Impact on Historical District.** Management states that *“the requirements of OP 4.11 on Physical Cultural Resources have been met”* as the Project complies with local law and institutions and impacts on cultural resources and historical sites have been minimized. The National Institute of Culture (Instituto Nacional de Cultura, INC) has oversight of the Project and approval is being sought from it for the design of the bus station under construction in the Barranco District.²³ Management also states that trust funds are being mobilized, independent of Project-related mitigation measures, to study the revitalization of historic areas of Lima.²⁴
34. **Project Appraisal.** Management believes it has *“broadly met the requirements of the Bank’s Policy OMS 2.20 on Appraisal.”* It elaborates by stating that while the project fully met conceptual, economic, financial, and commercial aspects of OMS 2.20 during preparation and appraisal, the Project *“was not ready for implementation at the time of approval”* since, for example, bidding documents consistent with the Bank’s procurement guidelines were not available and implementation and coordination capacity of Project agencies, especially in the environmental and social management areas, *“needed significant strengthening.”* Management concludes by saying that the assumption that outstanding issues would be resolved during implementation was *“overly optimistic.”*²⁵
35. **Project Supervision.** Management is of the view that Project supervision has *“partially met”* the requirements of OP 13.05 (Project Supervision). Management observes that the Project is a *“highly complex endeavor”* and that Bank staff *“made progressive efforts to meet the standards set by OP 13.05.”* Though a 2006 Quality of Supervision Assessment rated supervision as *“moderately satisfactory,”* more recent Bank efforts, particularly in light of the problems raised, have been proactive and robust.²⁶
36. **Action Plan.** The Management Response presents an Action Plan with related timeline to follow up on issues raised by the Requesters. The Action Plan proposes a traffic management study to be concluded by June 2010, active supervision of the environmental and social impacts, an ex-post environmental audit, support for dialogue and consultation with the help of an expert Facilitator, continuation of technical advice to Protransporte to help the agency

²¹ Management Response, p. 12.

²² Management Response, p. 16.

²³ Management Response, p. 17.

²⁴ Management Response, p. 18. After the submission of the Response, Management informed the Panel that the trust fund that would finance urban rehabilitation activities in Barranco was not granted.

²⁵ Management Response, p. 18.

²⁶ Management Response, p. 19

manage the issues raised in the Request and in the future, and finally supervision to ensure works in Barranco conclude satisfactorily.²⁷ Subsequent chapters of the Panel's report discuss aspects of the implementation of this action plan.

37. A chronology of activities and events related to the Project, with specific reference to the Barranco component of the Project and the Request for Inspection, is provided in Box 2.

Box 2: Timeline of activities and events related to the Project-- Barranco Component of Peru: Lima Urban Transport Project

- 1972- The National Institute of Culture designates Barranco as a Historical District
- 2001 April- Law of National System of Environmental Impact Assessment (Law N. 27446)
- 2003- Strategic Environmental Evaluation of the Lima Urban Transport Project (LUTP)
- 2003 June- Project Information Document for LUTP disclosed in World Bank Infoshop
- 2003 November 6- Project Appraisal Document Disclosed in WB Infoshop
- 2003 December- LUTP approved by WB
- 2005- Baseline Studies for COSAC 1
- 2005 March- Traffic Study
- 2006- Mr. Catañeda Lossio, Mayor of the Metropolitan Municipality of Lima (MML) begins to support the completion of the BRT.
- 2006- Protransporte team replaced by Mayor Castañeda
- 2007- New Protransporte team recruited.
- 2007 April- Works begin on COSAC 1
- 2007 December 07- Protransporte asks the MTC to certify the EIAs of the COSAC
- 2007- Environmental Impact Assessment of South Zone Projects of COSAC 1
- 2007-2008 August- Construction of busways in Barranco
- 2008- Local Mayor, Mr. Mezarina aligns with those protesting the BRT after the implementation of the traffic detours in the area, and launched some initiatives trying (unsuccessfully) to stop the construction of the BRT corridor in Barranco.
- 2008 January 11- MTC returns the EIAs to Protransporte for not complying with regulations and for initiating works prior to approval

²⁷ Management Response, p. 21-22.

- 2008 March- Supervision mission describes the discussion of surfacing issues about EIAs and the regulating authority
- 2008 August- A group of Barranco citizens send a letter of complaint to the Municipality of Barranco
- 2008 September 03-12- Supervision field visit to Barranco- The mission recommends reviewing consultation and better dissemination of information. The mission recommends that the website be constantly updated and linked to the World Bank website
- 2008 December 01- Letter from a group of Barranco residents to PROTRANSPORTE (Metropolitan Transportation Institute of Lima) concerning traffic complaints
- 2008- Environmental Management Plan for COSAC I South stations
- 2008 December/ January 2009 protests from Barranco start
- 2009 March- Supervision mission and Meeting with representatives of Salvemos Barranco to address concerns regarding the Metropolitano
- 2009 June 08, 12- Aide Memoir recounts the request for a legal analysis which states that Protratransporte did not act against Peruvian law in respect to the Peruvian EA law
- 2009 October 01- the Inspection Panel receives a Request for Inspection related to the Peru: Lima Urban Transport Project
- 2009 November- Establishment of the Mesa de Diálogo
- 2009 November 12- Management submits its Response
- 2009 December 07-09- Panel team conducts an eligibility visit to Lima
- 2009 December 15- Panel submits its Eligibility Report and Recommendation to the Executive Directors
- 2010 January- August- Management sends social specialists to areas affected by COSAC 1 to identify problems
- 2010 January 29- MML-Protransporte tells the Facilitator that it will no longer participate in the 'Mesa de Diálogo' (in annex from Facilitator)
- 2010 February 9- Letter from Facilitators asking the World Bank to convene the different parties in order to restart the 'Mesa de Diálogo'
- 2010 February 19- Letter from Salvemos Barranco to Facilitator addressing MML-Protransporte's decision to leave the 'Mesa de Diálogo'
- 2010 May 03-08- Panel team meets with the Requesters as part of the Investigation Mission
- 2010 July- BRT begins trial operations, free of charge, and without a public schedule.
- 2010 Project closing date extended to June and again to December 2010

E. The Panel's Eligibility Report and Eligibility of the Request

38. The Panel registered the Request on October 14, 2009 and Management submitted its response on November 12, 2009.
39. In line with its mandate, the Panel considered whether the Request for Inspection met the eligibility criteria set forth in the Resolution and in its subsequent 1999 Clarifications. For this purpose, the Panel reviewed the Request and Management's Response and visited the Project Area. A Panel team, comprised of the Panel Chairperson Roberto Lenton, Executive Secretary Peter Lallas, and Senior Operations Officer Tatiana Tassoni visited Lima from December 07-09, 2009.
40. During the visit, the Panel team met with signatories of the Request for Inspection and other Project affected people who reside in the District of Barranco, and with representatives of civil society organizations and experts in urban planning and architecture interested in the issues raised in the Request. The Panel also met with national and local Authorities, with officials of Protransporte, with Bank staff in the Lima Country Office, and with representatives of the Inter-American Development Bank, co-financier of the Project. The Panel visited the District of Barranco where the Requesters live, walked along the bus corridor in Barranco, Avenida Bolognesi, and visited areas in Barranco that the Requesters feel are suffering and will suffer adverse impacts as a result of the Project.
41. The Panel determined in its Report and Recommendation dated December 15, 2009, that the Request meets all of the eligibility criteria provided in the 1993 Resolution and Paragraph 9 of the 1999 Clarifications. The Panel noted that there were conflicting assertions and differing views on issues of harm and compliance with policies and procedures raised in the Request for Inspection, as evidenced by the various statements made in the Request, in the Management Response, and in the Panel's meetings with affected people and with Bank Staff. In light of these observations, the Panel recommended that an investigation be carried out on the issues raised by the Request.
42. The Board approved the Panel's recommendation on December 16, 2009, on a non-objection basis.

F. The Investigation Process and Methodology: Key Questions for the Investigation

43. This Report presents the findings of the Inspection Panel in response to the Requesters' claims. The Report focuses on whether Bank Management has complied with relevant Bank operational policies and procedures in relation to this Project, and if not, whether such noncompliance has contributed to the harm or potential harm alleged in the Requests. Among the issues presented to the Panel is whether actions required under Bank policy were properly taken to support the rights of, and to avoid harm to, the affected Barranco residents.
44. The Panel conducted a two-part investigation directed by Panel Chairperson Roberto Lenton, who served as the Lead Inspector for the Panel's investigation. The first part involved detailed research into Bank records related to the Project and extensive review of relevant

Project documents. The second part entailed a fact finding visit to the Project area and interviews with Bank staff involved in the Project. The Panel retained two experts who have knowledge of the operation of BRT systems all over the world to assist with the investigation.

45. A Panel team composed of the Panel's Chairperson Roberto Lenton, Panel Member Eimi Watanabe, Senior Operations Officer Tatiana Tassoni and two expert consultants on BRT systems, Professor Ralph Gakenheimer and Professor Jose Viegas, visited Lima, Peru from May 03-08, 2010. During its visit, the Panel team met with the Requesters, other residents and interested groups in Barranco, National and Municipal authorities, officials of Protransporte, Bank Staff of the Lima Office, staff of the Inter-American Development Bank, and civil society members interested in the issues under investigation.
46. Throughout its investigation, the Panel team identified and carefully reviewed all documents relevant to the case that the Requesters, Bank Staff, and other sources provided to the Panel. The Panel also analyzed other evidence gathered during the field visits or otherwise in its research, including scholarly literature. Through this process, and as a basis for its findings, the Panel reviewed key issues raised by the Request and the Management Response, the relevant Bank policies, the extent to which Bank Management complied with these policies in respect to each issue, and issues of harm resulting from instances of noncompliance.
47. This Report presents the results of the Panel's investigation regarding the issues raised by the Requesters in the Request for Inspection.
48. **Applicable operational policies and procedures.** With respect to this Project, the Panel assessed whether the Bank complied with the following Operational Policies and Procedures in the Request:

OP/BP 4.01	Environmental Assessment
OPN 11.03	Management of Cultural Property
OP/BP 13.05	Project Supervision
OMS 2.20	Project Appraisal

49. **Key questions for the investigation.** The focus of the Panel's investigation has been to establish whether the Bank complied with its own policies and procedures in the design, appraisal, and implementation of the Project, and whether, if instances of noncompliance were found, they caused, or were likely to cause, the harm or potential harm alleged by the Requesters and the people they represent. Key issues of compliance, analyzed in detail in chapters II and III, include the following:
- Overall, were the environmental, technical and social analyses specific to Barranco carried out in Project preparation and implementation adequate and in compliance with OP 4.01 on Environmental Assessment and OPN 11.03 on Management of Cultural Property?

- Was the environmental assessment process carried out according to the requirements of Bank policies, in particular with respect to 1) the assessment of potential negative impacts of the Project in Barranco and the identification of mitigation measures, 2) the analysis of Project alternatives and 3) dissemination of information and consultation with affected people?
- Was an analysis of the impacts of the Project on traffic management in Barranco carried out as required under OP 4.01?
- Were the mitigation measures, if any, identified to deal with traffic impacts adequate and in accordance with Bank policy?
- Was there an analysis of impacts on the architectural patrimony of Barranco as required by OP 4.01 and OPN 11.03 on Management of Cultural Property?

G. Context of the Request and of the Project: The District of Barranco

50. The southern border of the Lima Central Metropolitan area includes the Districts of Barranco and Chorillos. These Districts are bordered to the south by Lima Sur, a mostly informal neighborhood of low-income inhabitants.²⁸ The District of Barranco is located 10 km south of the center of Lima and has been noted to be an area that will possibly be affected by increased urban density and “*more intensive use of the ground in the short and long term.*”²⁹
51. The main roads in the District are Avenida Republica de Panama, Avenida Bolognesi, Avenida Grau, and Avenida San Martin. The BRT corridor is to transverse the District of Barranco on Avenida Bolognesi. Prior to LUTP construction Avenida Bolognesi was a four lane main corridor with two lanes of mixed traffic in both directions. Southbound vehicles are now rerouted through Avenida San Martin on the west side of the District. A map of Barranco can be found in Chapter III of this Report.
52. **Historical Background.** Barranco was created in October 26, 1874 as a popular resort area for wealthy Limeños and foreigners who constructed large houses and ranches by the seaside. At the time Barranco was connected to Lima by train and tram.³⁰
53. Barranco’s historical district was negatively impacted twice, causing the District to fall into decline. During the War of the Pacific with Chile, Barranco was sacked and burned by Chilean troops. Decades later, in 1940, the District was affected by a grade 8 earthquake.³¹ Many of the wealthier sectors of society moved away and many of the old buildings were in

²⁸ Traffic Study 2005, p. 8.

²⁹ Traffic Study 2005, p. 64.

³⁰ Traffic Study 2005, p. 9.

³¹ Ibid.

decay. However, Barranco is still considered to embody the “*Antique Spirit of Lima*,”³² and it is currently being reconstructed with the participation of the neighborhood and authorities.³³

54. **Current Characteristics.** Barranco is currently considered to be a district that attracts many foreigners and Limeños because of its qualities as a “*bohemian*” and its “*small, separate, town*” feel.³⁴ The National Cultural Institute has catalogued 170 buildings of Barranco as having “*architectural and urban value*.”
55. The District is divided into two demographically distinct sections to the east and west of Avenida Bolognesi, with different socioeconomic and cultural characteristics.³⁵ These differences are mostly between the medium-high socio-economic level of inhabitants west of the Avenue with “*permanent incomes from small business and commercial and professional activities*,” and a medium socio-economic level with modest incomes on the east.³⁶
56. The west sector of the District consists of the space between Avenida Bolognesi and the sea, and is the area where the majority of buildings and spaces of historic value are located. The buildings have been described as in good condition because of the interest in restoration projects that convert the old “*Barranquina*” houses into new uses such as art galleries, cultural centers, artist studios, cafes, restaurants, bars, etc.³⁷ Construction in this area has been mostly concentrated by the seaside where inhabitants with higher income levels have built high buildings and have increased the concentration of recreational activities in the area.³⁸
57. The eastern sector of the District is comprised of the area between Avenida Bolognesi and Avenida Manuel de la Fuente Chavez and Avenida Venegas. This area has a higher population density and lower buildings. On average the inhabitants of this area have lower incomes than those inhabitants in the western sector. There are fewer buildings of “*high architectural value*,” however public space is still highly valued and the zone has been described as having a “*neighborhood and local character*.”³⁹ On the border of the eastern sector of the District and Chorillos is the Municipal Stadium of Barranco, which concentrates the demand for space at the border of Avenida Bolognesi.⁴⁰
58. The Municipality of Barranco is currently proposing a new zoning scheme with the intention of “*facilitating vertical growth, promoting investment and urban renovation in the district*.”⁴¹

³² Guide tourist and Business of Barranco, Lima - Peru <http://www.barrancoperu.com/en/> 2010

³³ Traffic Study 2005, p. 9.

³⁴ “Barranco Peru,” <http://www.about-peru-history.com/barranco-peru.html>.

³⁵ Traffic Study 2005, p. 9.

³⁶ Environmental Impact Assessment 2003, p. 22

³⁷ Traffic Study 2005, p. 69.

³⁸ Traffic Study 2005, p. 69.

³⁹ Traffic Study 2005, p. 70.

⁴⁰ Ibid.

⁴¹ Ibid.

59. Barranco, and particularly its western side, is considered a separate calmer area that is “*small enough and safe enough to just wander about*,” and is being marketed as being distinct from “*the rest of Lima*.”⁴²
60. The west side of Barranco has become popular for its variety of day and nighttime attractions that draw both Peruvians and foreigners into the District. Popular tourist attractions include the Municipal Park of Barranco, the Bajada de los Baños, the Osma Paseo, the Bridge of Sighs, the Boardwalk, the Beaches, and Plaza San Francisco.
61. The west side of Barranco is often described as “*one of Lima’s hottest night spots*,” and as being reminiscent of “*the splendor of years past*.”⁴³ During the summer, the number of visitors to Barranco and its beaches increases. However, there is tension between areas used for commercial and recreational purposes with calmer residential areas. The 2005 Traffic Management Study notes the lack of adequate infrastructure for tourism circuits, parks and green areas, and pedestrian crossings.⁴⁴
62. Traffic in Barranco has experienced rigorous growth in the last decade. Traffic growth in the District and in Lima more generally is discussed in Box 3.

Box 3: Rapid Traffic Growth in Barranco and Lima More Generally

The number of motor vehicles in Lima has risen by a factor of three since the 1990s. Trip rates have also grown, reflecting the fact that people with cars drive them more, and those without them also travel more. All this has generated significant increases in traffic, especially in the suburbs of Lima.

Barranco in particular is faced with rapid traffic growth and urban transition in the near future. Because of its architectural and historic heritage and the fact that it is a pleasant district to visit or reside in, inevitably Barranco will have increasing amounts of traffic—disproportionally greater than other parts of the metropolitan area. In addition, as traffic increases substantially, land values will increase significantly and pressures to replace buildings to increase use density will occur.

All these factors need to be taken into account when considering the impacts of the Metropolitano on Barranco. Increasing traffic and congestion caused by the project are superimposed on very substantial background increases.

⁴² Mark Barrowcliffe, *The Guardian*, 20 December 2008, <http://www.guardian.co.uk/travel/2008/dec/20/peru-lima>.

⁴³ “Barranco Peru,” <http://www.about-peru-history.com/barranco-peru.html>.

⁴⁴ Traffic Study, p.70.

Chapter II: Environmental Assessment and Consultation

A. Introduction

63. This Chapter analyzes the environmental assessment process from Project preparation to the implementation phases, as it relates to the South corridor and Barranco in particular, given that the environmental analyses prepared during preparation were complemented by more technical and specific evaluations carried out during Project execution. The Chapter focuses on the key issues presented by the Requesters in relation to the environmental assessment process, with a particular focus on their overarching claim that the design, preparation and implementation of the Project did not take into account the particular characteristic of the Barranco neighborhood, which is a historical and “monumental” area of Lima, and has caused and will cause harm to it. They believe that the particular situation of Barranco would have required a serious and focused attention to different Project alternatives, as well as meaningful discussion and consultations with residents.
64. The Chapter addresses the claims that alternatives to the Project design were not seriously considered and that dissemination of information and consultation with Barranco residents were not carried out either during Project preparation or throughout implementation. To this end, sections B and C of the Chapter analyze the Environmental Assessments that were prepared for the South corridor, starting with a review of whether the environmental categorization of the Project was in compliance with the requirements of OP 4.01. Section D follows with a more general analysis of the documents and an examination of the analysis of alternatives vis-à-vis the provisions of Bank policy. Section E of the Chapter examines the important issue of adequate dissemination of information and consultation with the residents of Barranco. Section F then addresses Project supervision with respect to consultation and communication with affected residents. Finally, section G touches upon the approval of the EA by the competent Peruvian authority.
65. The claims of the Requesters, centered on the adequacy of the environmental assessment process, are particularly important because the purpose of an environmental assessment is to improve decisions by ensuring that project options under consideration are sound and sustainable, and that potentially affected people have been properly consulted. The Bank Policy on Environmental Assessment (OP 4.01) states that:

“EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. EA evaluates a project's potential environmental risks and impacts in its area of influence [footnote omitted], examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation. The Bank favors preventive measures over mitigatory or compensatory measures, whenever feasible”⁴⁵

⁴⁵ OP 4.01, ¶2.

EA takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources) [...] EA considers natural and social aspects in an integrated way. It also takes into account the variations in project and country conditions; the findings of country environmental studies; national environmental action plans; the country's overall policy framework, national legislation, and institutional capabilities related to the environment and social aspects [...].” (Emphasis Added)

66. This is important in the context of Barranco because the Requesters believe that potential negative impacts of the Project and its operations on the economic, social, cultural and environmental nature of the neighborhood were neglected or considered as a necessary cost of the benefits that the Metropolitano was to bring to the City of Lima as a whole.

B. Categorization of the Project

67. Screening is an essential component of the environmental assessment (EA) process. It determines “*the appropriate extent and type of EA*” applicable to a given project.⁴⁶ Screening assigns a project to one of three categories. “Category A”: a full EA is required. “Category B”: an environmental analysis is required but not a full EA. “Category C”: beyond screening, no further EA action is required. The classification of the proposed project depends in general on the type, location, scale, sensitivity, magnitude and nature of the proposed project’s potential environmental impacts.
68. Projects are categorized as A when their likely adverse environmental impacts are unprecedented, diverse or sensitive, that is, impacts that may be irreversible. Projects may be classified as Category B if it is judged that their potentially adverse environmental impacts on human populations or environmentally important areas—including wetlands— do not warrant a Category A, as they are less adverse, site-specific, and few, if any, of them are irreversible. Nevertheless, even in a Category B project, the environmental assessment is required to examine the project's potential environmental impacts and recommend any measures needed to mitigate or to compensate for adverse impacts and to improve environmental performance. The findings and results of a Category B environmental assessment must be described in the project documentation (Project Appraisal Document and Project Information Document). However, when the screening process determines, or national legislation requires, that any of the environmental issues identified warrant special attention, the findings and results of a Category B environmental assessment may also be set out in a separate report.
69. According to Project documents, the Project was classified as Category B on the grounds that “[a]ny possible negative environmental impacts from the project are easily predicted and can be adequately managed...”⁴⁷

⁴⁶ OP 4.01, ¶ 8.

⁴⁷ Integrated Safeguards Data Sheet, Report No AC70, dated May 13, 2003.

70. The Panel notes that several environmental impacts studies were carried out under the Project, during preparation and well into Project implementation. Nineteen EIAs relating to different segments of the BRT corridor were prepared under this Project.
71. As noted in the PAD, during Project preparation a Strategic Environmental Assessment and an Environmental Impact Assessment were prepared and submitted to the Bank in 2003.⁴⁸ The PAD also indicates that most aspects of the BRT design were available in preliminary form at appraisal although more work was needed to address a number of issues, such as circulation planning and traffic engineering, pedestrian access, location of bus depots and the design of bus stations. The SEA was aimed at directing the environmental management of the program as a whole during the different phases of planning, construction and operations. It therefore analyzed the social-political, institutional and regulatory environment, and evaluated the various impacts of the program.⁴⁹ Specific impacts of the bus corridor were analyzed in site-specific EIAs. Successive segment-specific EIAs were prepared after the Bank Board's approval of financing. Eight EIAs were prepared since 2003 specifically related to the South corridor and a traffic study was also prepared in 2005.
72. As the Panel's investigation focuses specifically on Barranco and the concerns brought to the Panel's attention by a group of Barranco residents the Panel's analysis will focus on the EIAs for the South corridor of the Metropolitano.
73. The Panel reviewed whether for this particular Project the Category B assignment complies with the Bank Policy on environmental assessment, taking into account the Bank's guidelines for environmental screening and classification.⁵⁰ The Project in question called for the construction of a segregated high-capacity busway, to be built along existing road corridors, and, as a result, did not require land acquisition. Terminals in the northern and southern end of the corridor were built along with 35 stations along the corridor.
74. The Panel agrees with Management that the Project's potentially adverse environmental impacts on human populations or environmentally important areas were not such as to warrant a "Category A" investigation. **The Panel agrees with this judgment and finds that the Project was correctly categorized as B, in compliance with OP/BP 4.01.** The Panel notes however some shortcomings in the environmental studies, especially with respect to the analysis of alternatives and the depth of analysis of the Project's impacts on Physical Cultural Resources and its impacts on the traffic rerouting in Barranco that will be discussed below and in the Chapter 3.

C. The Environmental Impact Studies

75. The Environment Impact Studies for the Project were conducted in four different stages: the Environmental Assessment of 2003, the Environmental Assessment of June 2005, the Engineering Studies of 2006 and the Environmental Impact Assessment of 2007. This section discusses the analysis of impacts in each of the environmental studies and summarizes the

⁴⁸ PAD, p. 39.

⁴⁹ PAD, p. 37.

⁵⁰ World Bank, Guidelines for Environmental Screening and Classification, February 2007.

Panel's findings on Management's compliance with the requirements of the Environmental Assessment.

1. The Environmental Assessment of 2003

76. As noted above the Project was classified with environmental Category B. According to OP 4.01, in Category B projects the potential adverse environmental impacts are site-specific and few, if any of them, are irreversible. Like in Category A projects, the environmental assessment must examine the project's potential negative and positive environmental impacts and recommend any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and to improve environmental performance.
77. The Panel reviewed the EIAs prepared for the South corridor of the Project. The Panel notes that the Environmental Impact Study of 2003 essentially makes a compilation of the different types of impacts and possible mitigation measures. However, the Panel finds that on all aspects related to traffic re-routing and their impacts, the Study suffers from the lack of a detailed traffic management study on which to base the impact assessments. Its conclusions, therefore, are of a very general nature, with no precise indication of what streets will suffer, or at what additional level of noise, air pollution, etc. The Panel notes that a traffic management study was subsequently prepared in 2005 but it presents a number of weaknesses that will be discussed in the next Chapter of this report.
78. Similarly, the Panel notes that impacts on cultural aspects are presented with very limited scope, mentioning only those impacts related to earth movements, vibrations and changes of pavement type, and ignoring all such issues of the vulnerability of buildings, the fumes and particles from passing traffic and the possible change of the character of some streets due to significant changes on the traffic volume they carry, with consequences on the type of activities willing to locate in such areas. The Panel notes that the EA is silent on potential long-term impacts of the Project on cultural property resulting from the operations of the BRT. As a result, no mitigation measures were identified to deal with these impacts.
79. The conclusions of the EA are overall that the Project would allow a better organization and reduction of traffic along its route, a better public transport to many of its users, and only minor negative impacts of various natures that are only vaguely identified.
80. In the section dedicated to Environmental Management, the EIA includes a section on communication, with clear concerns in regard to the citizens affected, and recommendations about a complaint office and public information. In traffic related aspects, there is a recommendation for the execution of a study on the redesign of crossings and alternative paths, another one on the signaling of crossings and selection of alternative routes for the detoured traffic, two more on the development of standards for the use of the corridor and of the surrounding streets, two more for the traffic management studies during the construction phase and in full operation of the BRT. There are also recommendations for several other projects, one dedicated to the reconstruction of the streets affected by the works, another to the urban qualification of the areas around the corridor, and various others.

2. The Final Report of the Environmental Assessment of June 2005

81. In June 2005 the final report of the Environmental Assessment of the COSAC I Line was delivered. The Panel notes that this EA looked exclusively at the issues of air quality and noise, and it concluded that the implementation of this Project would bring very clear benefits in both aspects. This study includes a detailed modeling of air quality and noise, but a very general description of traffic patterns after implementation. Thus, the expected replacement of many trips made in old (private and public transport) vehicles by trips in the new buses, at the time expected to be run on diesel Euro III standards, could only produce this kind of positive impacts. Moreover the study does not mention the impacts of the re-routed traffic into the local streets of Barranco.
82. In November 2005, a Mission to Lima by the Bank environmental specialist concluded that there was no special aspect on the South corridor that would justify a revision of the Bank's position that the Project would bring clear benefits. The environmental specialist however indicated that there could be problems with residents during construction given the narrow space available, and recommended good coordination with the Traffic Police to mitigate this problem.

3. The Engineering Studies Published in 2006 and the EIA of 2007

83. In 2006 engineering studies and designs were done for the COSAC corridor and stations, several of them including an environmental assessment chapter. In these studies there is detailed consideration of the problems caused by heavy vehicles during construction (including a Social-Environmental Mitigation Plan related to construction related traffic diversion), but only general statements are made for the operational phase, such as *"coordinate with local authorities to develop guidelines for a harmonious land-use in the influence area"*, *"coordinate with traffic police and local authorities to manage vehicular flows, especially in the pre-operation phase"*, and *"design very constraining policies and measures regarding authorization of public transport routes that might affect accessibility in the corridor."* Again, the problems related to traffic detoured towards local streets in Barranco are ignored.
84. The formal EIA reports for the south part of the corridor were concluded in the last months of 2007 (for the corridor) and the first months of 2008 (for the stations). Naturally, in these studies, detailed consideration is given to multiple aspects and impacts in the various sections of the corridor, generally stating that there will be great improvements in the future situation but negative aspects on traffic and cultural property are given much less consideration.

4. Findings on the Environmental Impact Studies

85. **The Panel finds that the Environmental Impact Assessment reports related to the south corridor seem to have been carried out with acceptable diligence regarding certain items in those assessments, e.g. impact evaluations on issues such as air quality and noise, and that mitigation measures identified to deal with these impacts are adequate. In this respect the reports comply with OP 4.01 on Environmental Assessment.**

86. **The Panel finds however that** while studies had an acceptable quality on the issues that directly affected construction and operation of the BRT, **there was little concern and analysis of impacts beyond the busway on such issues as pedestrian flows, vehicular traffic re-routing, and economic livelihoods. The studies are also inadequate as to the analysis of the Project's impact on the historical heritage and cultural value of Barranco and its vulnerability to significant traffic flows in the proximity of historical buildings.**
87. The Panel also finds that scarce attention was paid to identifying and mitigating potential negative impacts of the Project on the Barranco neighborhood beyond the immediate impacts of construction and operation of the BRT, while the emphasis of the studies was overwhelmingly on the Project's benefits. **The Panel finds that the analysis of potential adverse impacts of the Project and identification of mitigation measures fall short of meeting the requirements of OP 4.01 as far as the analysis concerns the District of Barranco.** While the Panel understands the importance of the Project for the City of Lima, compliance with OP 4.01 is crucial to ensure that projects financed by the Bank are environmentally sound and sustainable, in support of informed decision making.

D. Analysis of Alternatives

88. The Requesters claim that the environmental assessment did not adequately consider alternatives to the current project design. One of the alternatives the Requesters believe has not been given adequate consideration is a tunnel under Avenida Bolognesi that in their view would successfully address traffic and other negative impacts that may result from the Project.
89. Management argues in its Response that a thorough analysis of alternatives was conducted during Project preparation to identify the alternatives that would cause the least impacts, in accordance with OP 4.01. Management acknowledges however that disclosure of relevant studies and plans did not always meet the policy's requirements.
90. According to OP 4.01, the EA must also examine alternatives and identify ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts.
91. As noted above the Panel has examined in its investigation the EIAs prepared specifically for the South corridor of the BRT which crosses the District of Barranco at Avenida Bolognesi. The Panel understands that design alternatives other than Avenida Bolognesi were not seriously considered for the implantation of the corridor in the Barranco area, as the geometric limitations imposed Avenida Bolognesi as the only possible path. Alternative designs were considered for the bus stations, and the final decision has been approved by INC, recognizing this as a solution of low visual impact.
92. The Panel's experts note that, from the perspective of BRT design, some considerations appear to favor Avenida Bolognesi for a BRT corridor passing through the Barranco

District. The Panel notes, however, that for the residents of Barranco the introduction of the segregated BRT corridor in Barranco along the Avenida Bolognesi as the only option available was difficult to accept, since it had major implications both for the use of the Avenue and for the pattern of traffic within Barranco. This led to a very low level acceptance of that option by local residents. In many documents the Panel has reviewed, and in interviews with residents, the need for an alternative solution was indicated to be a key point of concern.

93. One of these alternative solutions, highlighted by Requesters and community members, is to make a tunnel under Avenida Bolognesi for the segment of the BRT system in Barranco, to accommodate the unique geography and historical character of the District. This tunnel would be about 1.5 km in length (buses on top, general traffic underneath). It would have the virtue of clearing the southbound traffic from Avenidas Grau or San Martín. Bank Management has informed the Panel that the Project is proposing to study the feasibility of a tunnel as a medium or longer term option for Barranco, taking into consideration ideas and proposals from the interested community, and in the broader context of urban revitalization.
94. The Panel was informed by Protransporte and municipal authorities that the tunnel option would not be possible in the short term for a number of technical and economic reasons. The additional cost involved, the small width of the avenue, the apparently fragile structural condition of many of its buildings, and the need for significant widening at the station sites (or at entry and exit ramps if the tunnel is for general traffic) are key factors that were cited against the tunnel solution.
95. The Panel experts note that there are potentially significant costs associated with this option including: danger or risk to abutting buildings, how to feed traffic into the neighborhood, ventilation concerns, as noted by Management, and disruption during construction. At the same time this option would add capacity for traffic, although the implications are not entirely clear. A preliminary feasibility assessment would have shed light on these issues as a basis for decision and dialogue.
96. A second alternative solution, which was also mentioned to the Panel in meetings with Project authorities as a possible long-term solution, is a direct BRT connection between the Via Expresa and the Panamericana Highway, which would allow the BRT system to avoid Barranco, and which would provide the corridor with uniform section and service conditions. However, Project authorities informed the Panel that this connection would not be financially within reach of MML for the next one or two decades, taking into account the costs of construction and expropriations.⁵¹
97. In the Panel's meetings with Barranco residents, the Panel was told that many local residents believe that the connection with the Via Expresa would be the best long-term solution, as this would then allow Barranco to become a branch of the BRT system, and not part of the trunk. This would, in their view, allow Avenida Bolognesi to recover a more "*local street*" character. The Panel experts note that this connection is being studied as an option by

⁵¹ Management informed the Panel that these include not only construction costs, but also human costs and issues relating to displacement and resettlement of people living along the projected pathway of the extension.

Management. The Panel experts note that this connection would enable a better achievement of the initial Project objectives of making a high quality connection to El Salvador and Cono Sur and would reduce traffic pressure in Barranco and Chorillos.

Picture 4: Panel Expert Consultants and Panel Members Meet with Requesters



98. Some residents of Barranco have also suggested an additional alternative consisting of one lane of general traffic in each direction on Avenida Bolognesi. In the opinion of the Panel's experts, such a solution would not be workable because (1) it would certainly not relieve the problem of needing more capacity for through traffic, in this case requiring a further solution in both directions, and (2) a halted vehicle in either lane would cause the traffic to be stopped in that direction and would pose a great difficulty in getting to the site.
99. **The Panel notes, however, that a review of the environmental assessments prepared for the Project reveal that these alternatives were not studied in sufficient depth to be able to assess their technical feasibility and cost, or their merits for Barranco as compared to the selected route. It is not clear to the Panel to what extent these options were put forward for consideration in the environmental assessment. The Panel observes that attention to these alternatives as well as adequate consultations with Barranco residents during the decision-making process could have avoided the tensions and strong opposition to the Project that arose later and that resulted in the Request for Inspection to the Panel.**

E. Consultation and Dissemination of Information

100. The Requesters claim that their concerns on the negative impacts of the project were not taken into consideration and that “*no public consultations were held*” during Project preparation and through the implementation of the Project. They are concerned that the “*negative impacts of the work are permanent, not temporary,*” and that their worries about the traffic re-routing going through the center of Barranco were dismissed and their views on feasible alternatives to the current design of the Metropolitano and the traffic patterns were ignored. They complained to the Panel about the lack of information and the lack of access to the environmental and technical studies, and the designs related to the Project.
101. Management states that after the EIA was made publicly available for comments in 2003 “*efforts were made to consult widely on the environmental analyses mentioned above, but Management notes that these were not always fully satisfactory in terms of prior information, disclosure, and follow up engagement with concerned stakeholders.*” These consultations were carried out particularly with bus operators and transit users in specific focus groups. Management agrees that “*the Project has not met fully the requirements of policies and procedures related to consultation and grievance mechanisms.*” It also concurs with the Requesters that the Barranco community was not sufficiently engaged in the consultation process. However, in 2008 as community concerns became “*apparent*” Protransporte became more engaged with the residents of Barranco to address their concerns.
102. With respect to disclosure of information, the 2003 EIA was taken off Protransporte’s website and in 2009 the full Spanish version of the EIA was sent to the Infoshop. Management acknowledges that the SEA and the EIA were not disclosed prior to Project appraisal, and that only the summary of the Environmental Assessment was available.
103. In the Response, Management acknowledges that with respect to the information and consultation program “*the Bank team could have intervened more forcefully*” and that it “*could have deployed Bank environmental and social specialists more systematically during the early stages of Project implementation.*” Since late 2007, however, social and environmental specialists were part of the supervision team and social and environmental specialists are also assigned to the Bank office in Lima.
104. The policy on Environmental Assessment calls for meaningful consultations during the EA process for all Category A and B projects, of project-affected groups and local nongovernmental organizations (NGOs) about the project's environmental aspects and for taking their views into account. Consultations with such groups should continue throughout project implementation as necessary to address EA-related issues that affect them. The necessary condition to achieve meaningful consultations is access to information. According to the policy, “*the borrower provides relevant material in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted.*” The policy also provides that any separate Category B report for a proposed project is made available to project-affected groups and local NGOs.

105. The PAD notes that information was shared and consultations carried out “*among all categories of stakeholders*” through focus groups, workshops structured interviews. The PAD adds that people from various agencies and local NGOs were interviewed for their opinions about options for public transport.
106. The Panel received numerous reports during its visit from residents of Barranco complaining that information about Project design was not shared during the decision-making process and thus the community did not have a chance to provide inputs on the design of the Metropolitano. Lack of information and consultations of the residents has been a key problem throughout the life of the Project; even at present people feel they have not been adequately informed of how the Project will impact their community. Traffic problems, in particular, are common concerns of the residents the Panel spoke to, not only because of increased traffic and congestions, but also because they fear potential negative impacts of the increased traffic on the architectural heritage of the District and a permanent alteration of the urban fabric and residential character of Barranco.
107. Records of consultations carried out early on the Project show that residents of Barranco were not involved in any consultation process that was carried out for the Project. Bank staff interviewed by the Panel and other interested parties the Panel met during its visits confirmed that not only was the community of Barranco not consulted on Project design but it did not have a chance to view Project design. While the SEA and the EIA describe consultations carried out especially at the institutional level, the 2005 Traffic Study which focuses on the areas of Barranco and Chorrillos does not include any section related to participation of the communities in the study or consultation with the affected communities about the various possible alternatives that were studied and their impacts.
108. The Panel notes that the 2006 engineering studies and designs for the Metropolitano corridor and station include the key recommendations of a “Strategic Communication Plan during construction of sections I and II.” where it is clearly stated that, along with massive information and coordination with local authorities, there should be frequent meetings with representatives of the affected population to inform them about the impacts of the project and the safety measures needed during the construction period. The Communication Plan also states that immediate attention should be given to any claim, suggestion or concern presented by the population, with adequate evaluation and submission to the environmental supervision committee.
109. The Panel notes that there is evidence that the quality of communication and outreach since 2006 has significantly improved, and that Bank Management has continually advised Protransporte on means to improve communication and the consultation process. The implementing agency hired a firm at that time to implement their outreach and communications program; developed a mobile informational medium as well as informational panels, stands and brochures; sponsored special programs such as a thematic painting contest for children; and provided information through a Protransporte website.
110. In spite of all clear recommendations in support of a transparent consultation process, with adequate representation of residents’ and other stakeholders’ concerns, it seems clear that

efforts in this direction were not taken as very important in the preparation and a significant part of implementation phases of the Project. An early signal of this is the fact that when environmental studies were published on the Web, only abstracts were included and the full versions were released much later, under pressure. Although many reports were made available online, they were frequently insufficient for careful scrutiny by the affected parties, and the additional information requested was not promptly (if at all) provided.

111. The Panel has found in its investigation that consultation was often unsubstantial, at least in regard to the Barranco residents. Many meetings have been held but consistently without adequate explanations or any willingness to listen to claims and suggestions. Bank Staff has also told the Panel that especially in the early phases of the Project consultations with residents were not carried out, rather meetings were held with organizations and local authorities. Interested citizens did not seem to be provided sufficient information about the Project and their views did not seem to have been taken into account in Project decision-making process.
112. Naturally, public worries and interest grew when construction began and traffic re-routed created a visible impact on the livelihood of all, even those relatively far from the construction site. After the beginning of construction and associated traffic re-routing, the Mayor of Barranco started opposing the project which he had initially supported.
113. It is the Panel's view that the presence of some element of politically motivated controversy around a Project of such high visibility should not be disregarded in the analysis that the Panel is conducting, and project leaders and managers need to take such factors into account. However, to treat all claims as if they were exclusively politically motivated inevitably leads to escalation of tension and anger, as was the case here. In this process, a group of Barranco residents has repeatedly tried to meet the Mayor of Metropolitan Lima, but to no avail, even after channeling their request through the Ombudsman office (Defensoría del Pueblo).
114. **The Panel finds that dissemination of information and consultation with the affected people in Barranco failed to meet the requirements of OP 4.01, especially in the early phase of the Project and during a good part of Project implementation. Only when residents began voicing their concerns in a more organized fashion were their concerns taken into consideration and a number of actions were taken, as described below in the Supervision section, to hear their views and address their concerns.**
115. **The Panel notes that this failure of consultation likely has had important consequences in the present case. The lack of adequate consultations, particularly during the critical design phase of the project, appears to have contributed to later tension and conflict about this important project for the City of Lima.**

F. Supervision of the Assessment and Consultation Process

116. The Bank policy on Project Supervision, OP 13.05, covers monitoring, evaluative review, reporting, and technical assistance activities to (a) ascertain whether the borrower is carrying out the project with due diligence to achieve its development objectives in conformity with

the legal agreements; (b) identify problems promptly as they arise during implementation and recommend to the borrower ways to resolve them; (c) recommend changes in project concept or design, as appropriate, as the project evolves or circumstances change

117. A review of supervision reports shows that community concerns about the impacts of the construction works and lack of information about the impacts of the works in the southern part of the corridor, including traffic going through the District, surfaced in 2005. A November 2005 Bank mission recommended strengthening the provision of information and fostering community participation. Successive Aide Memoires were concerned with communication issues but mostly with respect to the Flower Market in Barranco which had been resettled, and the private bus drivers who would be displaced by the new bus system. As noted above, in 2007, Protransporte prepared a Communication Plan to better inform communities about Project activities.
118. In 2008 the Bank mission acknowledged that Barranco would have a new circulation pattern for public and private transportation and thus it was recommended that the process of consultation is reviewed so that people are informed of the changes in traffic. At that time Barranco residents were voicing concerns about the impacts of the construction works and the traffic change. As noted above however Bank staff informed the Panel that no complaints from Barranco, of any kind, had been brought to the Bank's attention until after construction works began.
119. The March 2009 Aide Memoire addressed the Barranco issues in some length. The mission visited Barranco and discussed with its residents the concerns related to the Project. Various recommendations were made to Protransporte to try to address the issues and to promote dialogue and participation of the population, not only to provide information, but also to plan the re-routing and mitigate disturbances caused by construction.
120. **Mesa De Diálogo.** The situation in Barranco became tenser as construction progressed, with some groups voicing opposition to the Project as designed. Based on a perception of the communication difficulties between the two sides, the Bank took the initiative of launching a formal consultation process, the "Mesa de Diálogo," which started its activity in November 2009 with a facilitator initially suggested by Protransporte, and subsequently accepted by the Barranco residents. The level of mistrust was already too high and after 3 months of stalemate, in February 2010, the dialogue was effectively cancelled. The Panel notes that the Requesters first approached Bank Management to raise their concerns about the Project as designed and implemented in Barranco in 2008, while the Panel received the Request for Inspection in October 2009.
121. The facilitator himself presented his assessment of the process in a letter dated 9th February 2010 to all members of the "Mesa de Diálogo," requesting an intervention by the World Bank to summon all parties to resume the conversations. At the time of the Panel's presence in Lima, in early May 2010, this resumption of talks had not happened.
122. During its visits to Lima the Panel was struck by the fact that both parties involved in the "Mesa de Diálogo" were very dissatisfied with it and believed it did not work effectively. In

particular, participants of the Mesa also felt the lack of enforcement of “*rules of engagement*” hindered the effectiveness of the mechanism.

123. The Panel understands that the Bank participated in some meetings of the “Mesa de Diálogo” as an observer, especially when the focus of the meeting was the traffic conditions in Barranco and the new traffic study that was launched upon Bank initiative. The Panel understands that Management intends to recommend that the “Mesa de Diálogo” restart once the new traffic management study is completed. Management has informed the Panel that the draft of a new traffic management study is complete and will be open to comments from the community until early January and will then be submitted to the Bank by mid-January.
124. Among the steps proposed in the Management Response to address issues in Barranco is the establishment of a grievance office in Barranco for residents to present their complaints. The Panel visited the office during its visit in May 2010. It was not easy for the Panel team to identify the grievance office since no sign was posted outside. In meetings with Bank staff the Panel was told that the grievance officer is usually not in the office but generally visits houses in the District and can be reached by cell phone. Bank staff also informed the Panel that the office is not advertised and the person in charge usually not present because of strong opposition from local authorities who have become forceful opponents of the Metropolitano in Barranco. **The Panel notes that this project level grievances system has the potential to be an important avenue for residents to present their grievances and have their issues addressed, but notes that to do so effectively requires a functioning office.**
125. In 2006 a Quality of Supervision Assessment was carried out for the Project. The assessment concluded that since Project approval in 2003, major efforts in supervision were devoted to ensure project management capacity, including adequate staffing of the implementing agency to enable Project implementation to move ahead. The assessment noted that Bank project supervision was “*diligent*” and “*intensive*” but also that implementation was very slow and staff could have pressured more forcefully the implementing agency to deal with management issues. The assessment also noted that the social program suffered implementation delays.
126. The Panel notes that a social specialist has been a constant member of the team since February 2009 but that for long periods during Project implementation the Project team did not benefit from the consistent presence of a team member of social expertise. As problems in Barranco emerged in recent years, the Panel notes that Bank Management, with the important contribution of a social specialist, has been active in trying to address the issues raised by the Requesters and other residents of the District of Barranco. **The Panel finds that supervision did not ensure that Project affected people were adequately informed and consulted on the Project and its potential impacts until the end of 2008, when problems started to emerge in Barranco as the construction of the Metropolitano progressed. The Panel finds, however, that Project supervision, since 2008, has been more active in addressing complaints and reacting to emerging issues in compliance with the policy on Project supervision, as it is shown by the creation of the above mentioned Mesa de Diálogo with the participation of Barranco concerned residents and the opening of the grievance office in Barranco.**

G. The Environmental Approval Process

127. The Requesters contend that Environmental Impact Assessments (EIA) was “*not approved by the Ministry of Transportation and Communication (MTC) pursuant to Law 27446*” and “*has not complied with the public consultation mechanisms established by Peruvian law.*”⁵² According to the Request, the EIAs “*were not approved by the MTC because the works were initiated before the required environmental certification was obtained. Furthermore, the institution with the authority to approve the assessments was the Ministry of Transportation, not the Municipality of Lima.*”
128. Management states that the Bank has recognized since Project preparation that there were ambiguities in the national legislation with respect to the approval of EIAs. This ambiguity is mentioned in the 2003 EIA as well.⁵³ Management argues that in this context the Bank concluded that Project preparation was sound and that “*local processes had been proper.*” In addition, the EA was analyzed by the Ministry of Finance, which determined that it was proper. The Response adds that when works began in 2007 the legal uncertainty continued and the Environmental Management Plans attached to the EIAs were not formally approved. The Ministry of Transport therefore requested an environmental audit of the works once they are completed. In any event, Management states. “*[w]hether or not the environmental approval process failed to comply with national law would ultimately be a matter for the Peruvian legal system to decide...*”
129. The Bank policy on Environmental Assessment does not mention specific issues related to approval of an EA by national authorities but states that in preparing the EA national legislation must be taken into account. In addition, OMS 2.20 on Project appraisal states that among the institutional aspects of Bank-financed projects to be analyzed there is the organizational, managerial, administrative and legal requirements for implementation and operation of the Project.⁵⁴
130. A review of the Project preparation and appraisal documents show that the approval of the EIA was not identified as an issue requiring particular attention. The EIA mentions the law on environmental assessment and the legal ambiguity created by the lack of implementing regulations but does not provide any suitable guidance on the matter. However, the issue of the approval of the environmental assessment is discussed in supervision missions since 2005 and recurs in almost every Aide Memoire until the present.
131. In 2009, the Bank requested a legal opinion on this matter. The legal opinion concluded that based on the legislation in force in Peru when the EIA was approved by the Municipality of Lima, the Municipality was the competent authority to grant this approval.
- 132. The Panel concurs with Management that it is a matter for the Peruvian courts to decide whether the Municipality of Lima was the competent authority to approve the EIA based on the legislation in force. The Panel finds as a matter of due diligence and**

⁵² Request for Inspection, p.1

⁵³ According to Management Response, p.13.

⁵⁴ OMS 2.20, ¶ 26.

based on OMS 2.20, this issue should have been part of the appraisal of the Project and as such reported in the PAD. This did not happen and is not in compliance with OMS 2.20. However, the Panel also notes that supervision missions discussed and raised this issue with the authorities early in the Project implementation and well before construction began. As noted above, the Bank also requested a legal opinion on the matter. The Panel finds that during implementation Management acted with due diligence in compliance with OP/BP 13.05.

Chapter III – Traffic and Cultural Property Issues in Barranco

A. Overview

133. The Requesters believe that increased vehicular traffic in the District of Barranco has resulted in direct harm to their neighborhood and their way of life due to increased traffic congestion, resulting pollution and safety concerns, and potential damage to the District's cultural resources.
134. Many of the complaints the Requesters brought to the Panel's attention refer to alleged negative impacts of the Project as designed and implemented in Barranco concerning: (a) vehicular traffic, (b) pedestrian traffic and socio-economic impacts, and (c) the impacts on the Barranco Historic District. The Requesters distinguish between their concerns about vehicular and pedestrian traffic and feel harmed from the disruption of both kinds of traffic. It is the Requesters' opinion that the material damage that the Project has caused and will cause is of a permanent nature, rather than temporary, and will remain after construction works have terminated and the bus corridor becomes operational.
135. In Chapter II the Panel reviewed the Environmental Assessment process and whether the potential negative impacts of the Project in Barranco, along with related mitigation measures, were adequately identified during the Project preparation phase and throughout Project implementation.
136. As noted, the Panel found that the Environmental Impact Study of 2003 essentially made a compilation of the different types of impacts and possible mitigation measures regarding the direct impacts of the Project on air quality or noise, but lacked an adequate evaluation of all aspects related to traffic re-routing and its impacts. Its conclusions, therefore, were of a very general nature, with no precise indication of which streets will suffer, and what additional level of noise, smoke, etc. there may be. In light of this and the Requester's claim described above, this Chapter focuses on the traffic issues raised by the Requesters, the analysis of the traffic-related impacts of the Project and the adequacy of the mitigation measures that were identified, if any.
137. The Chapter addresses the claims that the Project caused and will cause permanent negative impact to vehicular and pedestrian traffic in Barranco as well as negatively affecting the Barranco Historic District. Section B of the Chapter addresses the impact of the Project on Vehicular Traffic, including an analysis of the Traffic Management Study and Plan. Section C follows with an examination of socio-economic issues related to street micro-design and pedestrian issues. Section D of the Chapter addresses Bank staff supervision of the traffic problem in Barranco and the Chapter concludes with section E on the issue of cultural property in the Barranco Historic District.

B. Project Impacts on Vehicular Traffic

138. **Requesters' Claims.** The Requesters state that during construction works, traffic in the District has been severely impaired, creating a chaotic and disorderly flow of public

transportation and private vehicles, which, on their own initiative choose to take lower-capacity alternate routes, causing traffic congestion throughout the District.

139. The Requesters claim that the construction of the busways severely affected traffic in the Barranco District because all vehicular traffic that used to go through Avenida Bolognesi is now re-routed through the center of Barranco, causing traffic congestion in areas previously not accustomed to such high volume of car traffic. They believe this occurred because construction works did not follow any traffic management or environmental management plans. In addition, the Requesters claim that residents were not kept informed about Project-related developments, nor could they express their concerns and views about solutions that would work best in their neighborhood to address the increase in traffic. As a result, living conditions have deteriorated in many areas of the District, increasing the risk of traffic accidents.
140. The Requesters note that, following complaints to the Project implementing agency, some problems were mitigated. However, they add that these measures are the result of improvisation rather than proper planning, and are so far insufficient to address what they believe will be permanent harm caused by the Project as designed and implemented.
141. **Management Response.** Management believes that traffic congestion in Barranco has been caused by changes in traffic patterns and slow Project implementation, and agrees with the Requesters that Barranco has been affected by this more than other districts in Lima. However, it is also the Bank's position that most impacts are temporary and the BRT system will ultimately improve the quality of life in Barranco. Traffic flows in Barranco will be eased by improved traffic lights in the District and the reduction in the number of small buses going through the center of Barranco.
142. As the Metropolitano becomes operational, Management states that with respect to traffic management measures the Bank has met the requirements of OP 4.01, but acknowledges that with respect to mitigation of "*residual adverse impacts*" the policy has not been fully met.
143. Management agrees with the Requesters that the Project has partially contributed to traffic congestion in Barranco during construction and adds that though the Metropolitano works were completed at the time of Management Response, the bus system was not operational and thus the traffic patterns could not be optimal. Management believes that most of the negative impacts of the Project raised by the Requesters are temporary.
144. Management states that the situation of the traffic in Barranco was supervised as it evolved and that the March 2009 supervision mission included a traffic management specialist who subsequently prepared a report on the Barranco situation, which will be mentioned in more detail below.

1. Traffic Management Study and Plan

145. The implementation of a traffic management study was one of the stated Project objectives in the Project Appraisal Document. The traffic management study was intended to improve conditions in the areas influenced by the Project, including reducing traffic congestion and

accidents once the project is operational. The study would also be used to mitigate “adverse” impacts. As detailed above, the Requesters claim, however, both congestion and accidents worsened during project construction and are convinced that these problems will remain after project completion and the bus line is operational. They also claim that no information was provided to them, nor consultations carried out with respect to the management of traffic in Barranco as a result of the Project.

146. As noted in Chapter II, OP 4.01 requires that an Environmental Assessment (EA) be carried out for projects proposed for Bank financing, in order to make sure that they are both environmentally sound and sustainable, and thus improve decision making. The EA evaluates a project’s “*potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.*”⁵⁵ Preventative measures, where feasible, are preferred by the Bank over mitigatory or compensatory measures.
147. According to Bank policy, the Bank must ensure that the Borrower, during the EA preparation process, consult with the project affected peoples and local NGOs to take their views and concerns into consideration. This consultation process is a continual process throughout the implementation of the project. For meaningful consultation with the project affected people, the Borrower is required to provide the relevant materials in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted.
148. As provided under the Project, two lanes of Avenida Bolognesi, which crosses Barranco North-South, would be exclusively used by buses while two lanes of general traffic would be left going northbound. The question of whether to divert southbound traffic from Avenida Bolognesi to Avenida Grau or to Avenida San Martín, the adequacy of these proposed alternatives and the evaluation of their impacts is the central issue the Requesters brought to the Panel’s attention and is what this section of the Report focuses on.
149. According to the Project Appraisal Document, to achieve its objectives the Project will implement among others “*...traffic management measures to enhance transport and environmental conditions including road safety improvements, transport emission reductions and better access for vulnerable road users such as pedestrians, bicyclists and mobility constrained persons.*” One of the Project target indicators is “*effective traffic management and enforcement measures planned and designed by MML.*”⁵⁶ Among the positive impacts of the Project, the PAD lists reducing traffic congestion and traffic accidents,⁵⁷ not only by constructing and operating the BRT per se, but also by implementing mobility and environmental improvements including repaving of mixed-traffic lanes adjacent to the new busways; sign posting and road markings along the corridors; traffic signal improvements

⁵⁵ OP 4.01, ¶2.

⁵⁶ PAD, p. 4.

⁵⁷ PAD, p. 6.

along and in the immediate vicinity of the corridors and improvements to pedestrian and vehicular traffic in five sensitive areas.⁵⁸

150. The impacts of the Project on traffic conditions in the project area in general and the District of Barranco specifically were evaluated in the Traffic Management Study carried out in 2005. The objective of the study was to evaluate in detail the impact of the implementation of the BRT in the southern area of Lima and to develop a traffic plan that facilitated pedestrian circulation and optimized private transit while ensuring the conditions for operating the bus system.⁵⁹ The 2005 traffic study defines the area of influence of the project for the southern segment of the bus corridor as the entire District of Barranco and part of the District of Chorrillos.

2. Analysis of the 2005 Traffic Study

151. The final Traffic Study was delivered in March 2005. The 2005 Study presents a physical diagnostic of the study area and describes the geographical, demographic and urban characteristic of Barranco and Chorrillos. It follows with an operational diagnostic which includes the analysis of field data and modeling of the actual situation in the study area. This study makes a detailed analysis of the existing situation and compares three rather different traffic management schemes.
152. The recommendations in this study cover the BRT corridor itself, the feeder routes, the changes for the conventional public transport, the handling of private motorized traffic and pedestrians, the specific changes of traffic management on weekends, the schemes for pavement rehabilitation and maintenance, as well as the traffic light system and the plans for enforcement.
153. The alternative recommended in the 2005 Traffic Study proposed a diversion of southbound traffic, which was previously using Avenida Bolognesi, onto Avenida Grau, the current direction of which would be reversed from northbound to southbound. It is worth noting at this point – which will be analyzed below – that this recommendation was not implemented and presently traffic is diverted southbound to the historic center of Barranco through Avenida San Martín, a solution that is a reversal of the 2005 proposal.
154. Management indicated in its 2009 Response that it noted and monitored the traffic problems in Barranco as part of its supervision activities, and as a result included a traffic specialist in the March 2009 supervision mission. According to the Response, the specialist concluded that the 2005 traffic management plan was of “*high quality*.” However, the specialist also indicated that congestion was mainly caused by traffic signals that were not properly timed on the ground, and were further worsened by the construction works for the Metropolitano. Additionally, a lack of adequate parking, which led people to use narrow street and sidewalks as parking alternatives, was seen as compounding the whole problem.⁶⁰ The Response added that the specialist recommended to improve the timing of traffic signals and to place traffic

⁵⁸ PAD, p. 18.

⁵⁹ Municipalidad de Lima-Protransporte. Estudio de Tránsito del Área Sur de Lima. TARYET. March 17, 2005, p. 5.

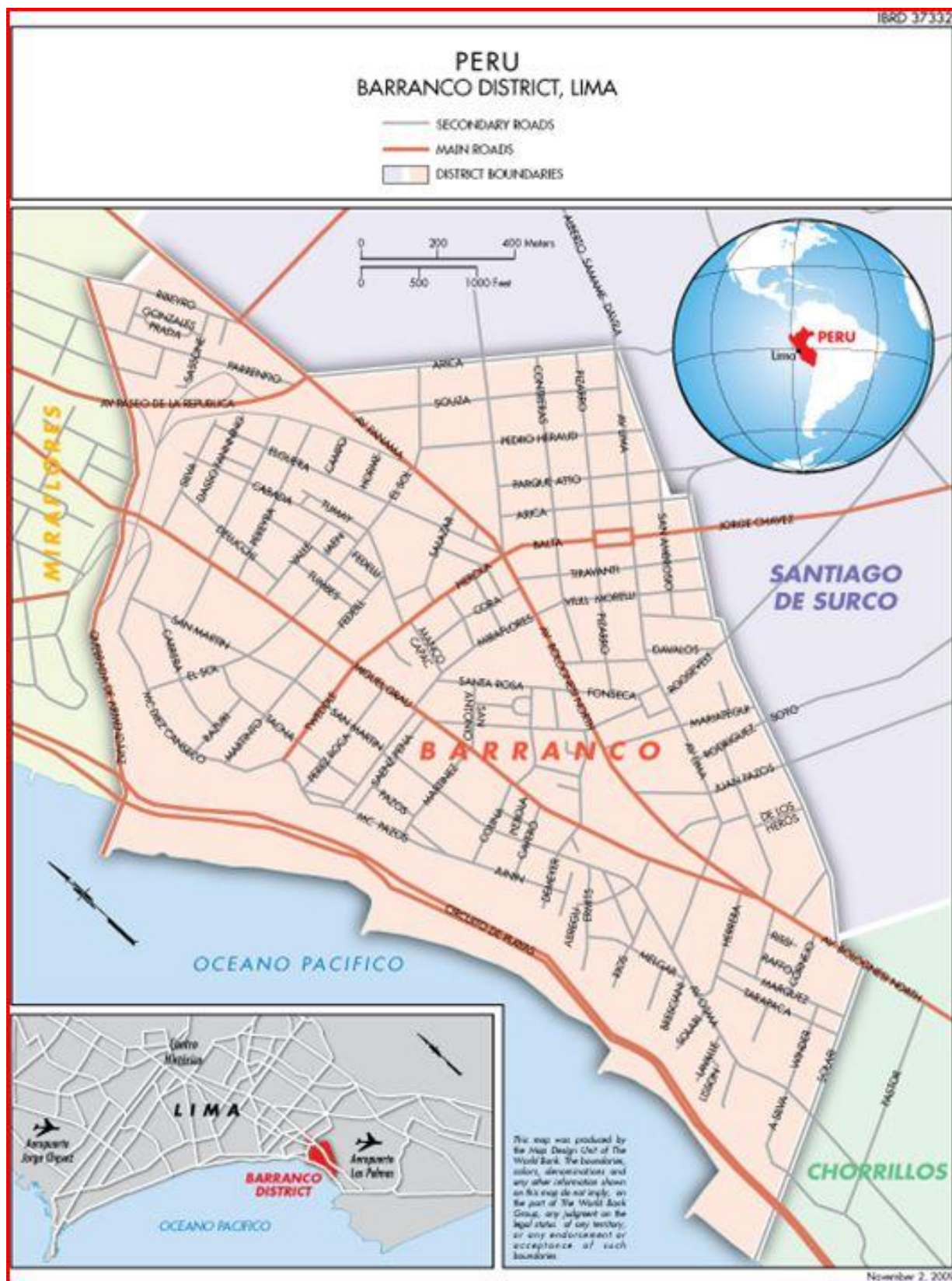
⁶⁰ Management Response, ¶ 36.

signs, along with speeding up the implementation of the Metropolitano to allow final traffic patterns to be put in place.

155. The Panel has reviewed the 2005 Traffic Study and finds that, while such a study could have been a good opportunity to provide a careful representation of the traffic-related possibilities and difficulties associated with the implementation of the Project, it presents several weaknesses. The Panel notes these weaknesses below:
156. The study failed to take into account a critical view of problems and challenges that the introduction of the BRT corridor could raise; the justification of the proposed traffic schemes other than to optimize service for the BRT and a few generalities with regard to the transversal movements⁶¹ is extremely short.
157. The vehicular flow indicators used for evaluation of alternatives, while useful, are not the only relevant ones; for example nothing is mentioned with regard to the changes imposed on the connections between Surco and Barranco or specific movements formerly attended with left turns and then forced to make loops; no distinction is made between flows in public transport and in private transport; no consideration is made to the risk of disturbing a visible hierarchy of the street network; the issue of pedestrians, although frequently mentioned, is treated with visible limitations; there is no mention of the fact that the size, general layout and historic value of Barranco could justify a softer design for the BRT corridor within its limits.
158. **The 2005 Traffic Study offered the opportunity to evaluate the permanent impacts of the Project on traffic patterns in Barranco and to devise adequate measures to mitigate them. The Panel finds, however, that the 2005 Traffic Study contains a number of weaknesses in its analysis, and as a result, it falls short of meeting the requirements of OP 4.01, especially with respect to the depth of the evaluation of impacts the Project may cause on the traffic conditions in Barranco.**
159. **The Recommended Alternative (Traffic Management Plan) and the Solution Adopted.** The Panel's experts have analyzed the traffic re-routing pattern recommended in the 2005 Traffic Study. It is their view that the option to use Avenida Grau can be considered a natural arrangement, since the north end of Avenida Grau is (or could easily be) connected to southbound traffic from the north by Avenida Reducto, as well as a loop from the Via Expresa and through that connection to Avenida Grau from the Avenida República de Panamá. The south end Avenida Grau connects conveniently with Avenida Bolognesi. By this plan the diverted traffic would go straight through Barranco on a primary, already commercial street, with no turns. A map of Barranco follows.

⁶¹ Traffic Study 2005, p. 76.

Figure 1: Map of Barranco



160. The Panel notes that at some point in time there was a decision to leave Avenida Grau as a South to North artery and send the diverted traffic through a pattern that forms three sides of a large rectangle through residential and “monumental” Barranco, and thus re-routing traffic through the central Avenida San Martín.⁶² In the opinion of the Panel’s experts, the benefit of this decision is that it avoids the transitional awkwardness of changing the direction of Avenida Grau, and possibly avoids some additional investment in the connections of Avenida Grau with roads to the north.
161. Avenida Grau and Avenida San Martín have roughly the same number of properties labeled “historic” in these stretches (according to Plano 4.11 in the 2005 Traffic Study). The important difference is that Avenida Grau is a more commercial street and is a through street, requiring no turns to other streets in the course of crossing Barranco. It bears the traffic better. Both streets are of variable width, tending to be wider in the northern half of this stretch and narrower in the southern half, beyond Avenida Miraflores. It might be necessary to cancel parking in the southern part of the stretch in either case.⁶³
162. The Panel notes that the reasons for the change from using Avenida Grau to Avenida San Martín are not clearly stated in any document. In addition, the Panel found no analysis of the traffic pattern re-routing currently implemented that differs from the 2005 Traffic Study and of its impacts on the neighborhood traffic. In meetings with municipal authorities, the Panel was told that the cause for changing the solution proposed by the 2005 Traffic Study was opposition by some residents. Others have instead told the Panel the municipal authorities were not satisfied with the solution recommended in the 2005 Study.
163. Bank staff told the Panel that during supervision missions they noted that the traffic pattern implemented in Barranco differed from the recommendations of the 2005 Traffic Study but also that the traffic authority in Lima had presented technical arguments justifying the change, which was ultimately approved by the Municipal Authorities. Staff further indicated that it did not consider the new traffic pattern a good solution and thus raised this issue repeatedly with the implementing agency, but with no practical results. Nevertheless, the Panel was told that while the lack of implementation of the 2005 Traffic Study proposal was one of the reasons for Barranco’s traffic increase, in the opinion of the traffic specialist, the main cause of the congestion were outdated and unsynchronized traffic lights. Solving the traffic light problem, Staff said, would lead to easing traffic congestion in Barranco.
164. The Panel notes that there is no record in the Aide Memoires about the changes in traffic patterns with respect to the 2005 Study. A 2009 Aide Memoire acknowledges the complaints from the Barranco residents regarding traffic congestion in the District, especially in the

⁶² The southbound traffic would come off Avenida Republica de Panamá on either Avenida el Sol or Avenida Nicolás de Pierola, across the historic residential Avenida San Martín, crossing through the Parque Municipal (Barranco’s principal public space) to Avenida Pedro de Osma (also an important historic street) and return to Avenida Bolognesi via Avenida Independencia.

⁶³ Some neighbors have suggested one lane of general traffic in each direction on Avenida Bolognesi. According to the Panel’s expert this solution would not workable because (1) it would certainly not relieve the problem of needing more capacity for through traffic, in this case requiring a further solution in both directions and (2) a halted vehicle in either lane would cause the traffic to be stopped in that direction and great difficulty in getting to the site.

historical zone, but it was the opinion of the mission that the situation would improve by installing and rationalizing traffic lights in Barranco. No mention is made in any report of the solutions adopted in Barranco as being different from the one in the Traffic Study, nor is any analysis of the impacts made or proposed on this.

165. The Panel notes that re-routing the general North-South traffic towards the inside of Barranco's west side represented a major change in the organization of traffic within Barranco, significantly changing the character of some streets, due to much higher traffic loads. This is of special importance given the classification of Barranco as a historical district, and its particular role as a leisure district in Metropolitan Lima.
166. The Panel's experts believe that the Avenida San Martín route, the currently assumed trajectory, appears to be conspicuously inferior to the solution proposed in the 2005 Study. The current route is much longer, goes through residential neighborhoods on streets not prepared for rapid through traffic, clearly burns more fuel and generates more air pollution, is exposed to a much higher accident rate because of mixing through traffic with local traffic, takes longer in driving time and creates much more congestion.
167. This diversion of traffic from Avenida Bolognesi to Avenida San Martín has no significant merit other than avoiding the need to change the direction of Avenida Grau to absorb that traffic. Some redeeming virtue might be found in the possibility that it would dissuade North-South traffic through Barranco, encouraging travelers to find other routes.
168. It seems evident to the Panel that some aspects of the traffic problem were not properly studied before implementation. There has been an apparent lack of detailed engineering design, with solutions generated "*on the site*," an aspect which has been confirmed to the Panel during its visit to Lima.
169. The Panel was informed in several meetings during the visit to Lima and by Bank Staff in interviews that the recommendations of the 2005 Study would be implemented once the Metropolitano became operational. The Panel finds it difficult to understand the reason for not adopting that solution right away, especially considering that a new traffic pattern was implemented in the interim period and generated a high amount of protests and controversy.
170. In sum, the Panel notes that the solution recommended in the 2005 Traffic Study was not implemented, and a different traffic pattern was actually put in place. It is the view of the Panel's experts, however, that the alternative proposed in the 2005 Traffic Study is likely to respond better to the concerns expressed by the Requesters and other Barranco residents than the solution currently implemented. **The Panel found no record indicating when the 2005 Plan was changed to adopt the existing solution, nor did it find any analysis of this new alternative and its impacts. This is not in compliance with OP 4.01 on Environmental Assessment.**

C. Pedestrian traffic and Socio-Economic Impacts

171. An important part of the future for Barranco is an adequate pedestrian environment. This is required by the resident population, especially school children, and also as a setting for those who arrive to experience its historic and environmental endowments. Construction of the project has resulted, in some instances, in the loss of access and the loss of livelihoods, which has impacted the socio-economic environment of the Barranco District.
172. **Requesters' claims.** The Requesters' claim that the traditional social and economic exchange between the Districts of Barranco and Surco has been interrupted. The Requesters described how, in their view, the lack of an adequate environmental and socio-economic analysis of the Project contributed to several negative socio-economic impacts in Barranco.
173. They stated that, as a result of the Project, the Metropolitano practically acts as a "wall" between the east and the west sides of the District, making pedestrian crossing between the two sides difficult and dangerous and limiting communication and access to basic services. In their view, this would be particularly harmful for lower income residents of the eastern side.
174. The Requesters are concerned that the BRT corridor on Avenida Bolognesi will produce a barrier along the avenue to pedestrian movements between the historic west side of Barranco and the east side and the District of Surco. In addition, the Requesters complain that a pedestrian bridge that used to allow children to cross Avenida Bolognesi and safely reach their schools, including a school for children with special needs, was removed, thus making the crossing very dangerous.
175. Other social and economic concerns the Requesters raised because of changes in traffic patterns included: the sidewalks along Avenida Bolognesi which are narrow, without access ramps and in many instances blocked by project-constructed columns or trees; the loss of access to properties by a number of residents along Avenida Bolognesi; the loss of clientele by some businesses; and the difficulties in accessing the adjacent Surco District, which has close socio-economic relations with Barranco.
176. **Management Response.** Management's position is that the Project will reduce rather than exacerbate the barrier effect created by Avenida Bolognesi because the number of buses will be lower than before and crossing the avenue will be safer both for pedestrian and cars. Management added that a new system of traffic signals was to be implemented to allow better operations of the intersections.⁶⁴
177. The Project eliminated an inter-district space known as the Óvalo Balta, replacing it with an intersection, "*making communication between Barranco and Surco more difficult but not blocking it.*" Management states this was done to improve the "*flow of the mass transit system.*"⁶⁵

⁶⁴ Management Response, p. 26.

⁶⁵ Management Response, p. 26.

178. **The Metropolitano “Barrier.”** The barrier effect would be part of an environmental assessment evaluation of the impacts of the proposed Project, environmental but also socio-economic as the *“EA is initiated as early as possible in project processing and is integrated closely with the economic, financial, institutional, social, and technical analyses of a proposed project.”*⁶⁶
179. The Panel’s experts note that since the BRT lanes will not be a continuous flow, given that the general traffic is coming from only a single direction and since there will be crossing signals for the passengers at both ends of the BRT stations, it seems that Avenida Bolognesi will be easier and safer to cross, and will have more locations, than before the Metropolitano project.
180. The Panel’s experts also note that the barrier to crossing Avenida Bolognesi may be an understandable perception because the narrow central strip of the road available for the Metropolitano stations results in narrow platforms that can handle passengers travelling only in one direction. The consequence is a station twice the length of one that would have the strip breadth to handle passengers in both directions, the normal design in other BRT systems. This produces a very long station. There was no alternative solution to this other than to cancel station service in one direction or the other, not a feasible design.
181. Another impact of the Project has occurred in relation to the connections of vehicular traffic between Barranco and Surco, currently difficult from west (Barranco) to east (Surco) because of the choices made regarding one-way streets. As for other changes in traffic patterns, the Panel found that no consultations were carried out with the interested community. Such negative impact, without any previous notice, and associated with measures different from those in the published study, could only arouse protest.
182. It is the Panel’s view that as far as traffic safety on Avenida Bolognesi is concerned, the future situation will be much safer than before. This is due to a combination of factors: traffic flows in the BRT corridor are much lower than those of general traffic (2 minute headway on the peak and 5 minute off peak), and general traffic will be flowing in only one direction. Moreover, a modern traffic light system is foreseen, which will make crossing in general a much safer process.
183. With respect to the pedestrian bridge, the Panel was told during its visit to Lima that the bridge would be rebuilt and that works near the schools had begun.⁶⁷
184. **Sidewalks and Related Matters.** During its visit, the Panel observed that access to homes and businesses on the west side of Avenida Bolognesi is permissible with a mixed-use lane for pedestrians and (slowly moving) cars, which seems to meet the needs of residents.

⁶⁶ OP 4.01

⁶⁷ However, the Panel was also informed recently by the Bank’s Task Team that a new traffic specialist hired by the Bank has recommended for safety reasons the implementation of cross-walks and timed traffic lights in lieu of the bridge.

However, passage on the east side of Avenida Bolognesi is now rather narrow. The Panel could not find Project designs that explored ways to address this problem, such as the possibility of allowing a small additional width on the east sidewalks without sacrificing the west mixed use lanes. **The fact that this awkward design was not reviewed with the community and does not appear in the principal reports of the project documentation is not consistent with OP 4.01 on Environmental Assessment.**

185. Sidewalk conditions on Avenida Bolognesi need further attention. There are elements of the pedestrian ways, unfortunately on the route used by school children, where the sidewalks are very narrow and nearly completely obstructed by utility poles or trees, and in an isolated case at a critical location for school children where the curb is very high above the street.
186. **Sidewalk conditions are of considerable concern for the community. As noted above, it seems that solutions were adopted on site rather than after a careful review of possible alternatives. In conversation with the residents it became clear that the community never saw drawings at this level, which would have been very important to their understanding of the conditions of pedestrian movement after construction. This constitutes an important lapse in communication with the community, and is not in compliance with OP/BP 13.05 and OP 4.01.**

D. Supervision of the traffic problem in Barranco

187. As noted above, the Panel has reviewed the supervision reports regarding regular missions to the Project area and found no mention of the change in traffic pattern – from the solution proposed in the 2005 Traffic Study to the current re-routing through the historical center of Barranco. Supervision reports therefore do not indicate whether an analysis of the impacts of the new traffic pattern was made or proposed during the missions. The Panel also notes that it is still not clear when the decision to implement the current traffic solution was taken by Project authorities. Neither supervision reports nor Bank staff could provide clarification on the timing of this decision. However, the Panel also wishes to note that Bank Staff stated in interviews that during supervision missions they had realized that the traffic pattern implemented was not the one recommended in the 2005 Study and raised this issue in a number of instances with the implementing agency, but to no avail.
188. **The Panel finds that supervision of Project activities in the District of Barranco was not consistently up to speed with events and circumstances on the ground between 2007 (when construction works started and traffic re-routing became necessary) and 2009 when Barranco residents started to raise their complaints.** According to BP 13.05 on Project Supervision, supervision reports should “*identify problems promptly as they arise during implementation and recommend to the borrower ways to resolve them;*”⁶⁸ This did not happen with respect to the traffic problems in Barranco and the Panel finds that Management is procedurally not in compliance with the policy on supervision.
189. **However, the Panel also finds that once problems were identified in 2009 as a result of residents’ complaints and related monitoring of the situation in the context of**

⁶⁸ OP 13.05, ¶2.

supervision missions, supervision activities strengthened and a number of actions were taken to address the issue, including contracting a traffic specialist and proposing a new traffic management study. The Panel finds that this is in compliance with OP 13.05 on Project Supervision, which requires Bank Staff to identify problems promptly as they arise and to recommend ways to solve them, as well as to recommend changes in the project concept as appropriate as the project evolves.

190. **The Panel also notes that Bank Management facilitated the creation of a round table (“Mesa de Diálogo,” discussed in the previous chapter), where the traffic problem was to be discussed between Protransporte and the residents of Barranco, in order to find short and long-term solutions to this issue. The Panel finds that this meets the supervision requirements of the OP 13.05.**
191. **The new Traffic Management Study.** The Management Response includes, as noted in other parts of this report, proposed steps to address the concerns presented by the Requesters. The first of these steps is a traffic management study *“encompassing such aspects as the management of road closures and detours, the synchronization of traffic signals, and the operations of intersections in order to improve traffic flow and enhance road safety...”*⁶⁹
192. The Terms of Reference (TOR) for the Study states that this study *“seeks to develop a traffic and pedestrian management plan for the Barranco District and the historic Center of Lima that takes into account the operations of the Metropolitano BRT system and that mitigates its potential negative effects.”* The Plan is to include a short-term plan for traffic management based on the analysis of various alternatives, including the solution proposed by a group of Barranco residents, the dissemination of results and the capacity of the municipality. The TOR adds that an expert traffic engineer was hired by the Bank to assist in the supervision of the study. The TOR considers the micro-effects of the Metropolitano Project, in particular the need for attention to bottlenecks and the need for separate solutions that give priority to private vehicles and to pedestrians.
193. The Terms of Reference were eventually revised to include an additional traffic mitigation measure, the continuation of the Via Expresa, as a highway that would be the continuation of the Panamericana highway. The Panel learned during its visit that the construction of this highway would be a mitigation measure favored by all stakeholders, including the Requesters, because it would extend from in or near Barranco in an east south-east direction toward Surco and beyond and would carry the bulk of traffic away from the District, maintaining its local character.
194. The Panel notes that during a recent supervision mission, Management noted that with correct traffic management the limited congestion can be reduced, and that the number of bus routes along the streets of Barranco is lower. According to the Bank team, Protransporte informed that with the operation of the Metropolitano in Barranco part of the bus routes were restructured. The remaining routes will be restructured once the entire project is operational. A draft traffic management study has been completed and at the time the Report went to press Bank Management was waiting for community comment on the draft.

⁶⁹ Management Response, p. 21.

195. **The Panel commends Management for the efforts it made to address the concerns of the Requesters regarding the traffic conditions in Barranco by proposing, among other things, a new traffic management study. According to its Terms of Reference (TOR), the study would analyze and compare different alternatives, including an alternative proposed by residents of Barranco. The Panel finds that Management’s supervision of the Project, with respect to the efforts made to address the traffic problem, is currently in compliance with the requirement of the Bank policy on Project Supervision.**
196. **The Panel is also encouraged by recent indications from Management that the Project now is committed to reviewing not only short-term but also medium/longer term options to address these issues and shortcomings, including the options noted above. The Panel notes the importance of this review - and of the engagement by affected people - to the community in Barranco. In this regard, the Panel notes that Management indicated that the Mesa de Diálogo, discussed in Chapter II, which was interrupted in February 2010, is to be reconvened in the near future with a new facilitator.**

E. Cultural Property Issues: Impact on Historic Architectural District

197. **Requesters’ claims** The Requesters argue that southbound traffic that used to run through Avenida Bolognesi and was then re-routed through the Barranco Historic District and brought excessive vehicles onto residential roads. The Requesters also believe that the direct and indirect impacts of the works have caused irreparable harm to the architectural heritage of the District, which was declared a historic district by the National Institute of Culture (INC).
198. The Requesters add that the residential character of the Barranco District, its socio-cultural dynamics, and the conservation of the historic area of the District have deteriorated as a result of the Project. The architectural heritage of the District has suffered “*irreparable*” harm. More specifically the Requesters raised concerns about the rerouting of traffic from Avenida Bolognesi to the historical center of Barranco, which in their view has dramatically increased traffic through the historical center of the District, thus contributing to the degradation and pollution of the cultural and architectural patrimony of Barranco.
199. The Requesters also showed the Panel some Project structures adversely affecting historical properties. According to the Requesters, Project studies failed to adequately consider these issues and impacts on the Barranco District and, as a consequence, the Project will result in permanently degrading the District’s historical center and thwart its tourism-derived economic possibilities.
200. **Management Response** Management believes that the Project “*has not caused irreparable harm to the architectural heritage of the District.*”⁷⁰ The Environmental Assessment and the Strategic Environmental Assessment addressed the possible impacts to physical cultural

⁷⁰ Management Response, p. 35.

resources for both downtown Lima and Barranco and suggested measures to protect these cultural resources including requiring INC approval of Project designs. Management notes that the INC has been directly involved in the Project because works with potential impacts on the cultural heritage of Peru have to be approved by the INC. The Response adds that Bank's supervision has made sure that Project activities respect the architectural heritage of Barranco.

201. The policy on Environmental Assessment requires the environmental assessment to take into account, in the evaluation of potential impacts of the proposed project, the natural environment but also the social aspects of the project, including physical cultural resources, and to consider environmental and social aspects in an integrated way. In addition, project affected groups and local non-governmental organizations should be consulted about the various aspects of the proposed project and their views should be taken into account.
202. A specific safeguard policy addresses impacts of Bank-financed projects on physical cultural resources, OPN 11.03.⁷¹ According to OPN 11.03 *“before proceeding with a project Bank staff must (1) determine what is known about the cultural property aspects of the proposed project site. The government's attention should be drawn specifically to that aspect and appropriate agencies, NGOs or university departments should be consulted: (2) If there is any question of cultural property in the area, a brief reconnaissance survey should be undertaken in the field by a specialist.”*⁷²
203. As noted above, the impacts of a project on cultural resources is addressed through an EA, and the borrower must identify the physical cultural resources that are likely to be affected by the project and must assess the potential impacts on these resources *“as an integral part of the EA process.”* This policy stresses the need for consulting project affected groups, NGOs and government authorities with respect to potential impacts and mitigation measures.
204. **Analysis and Findings.** Management notes in its Response that the potential impacts of a traffic **detour** were identified in the EA and that mitigation activities were considered given the particular historical importance of Barranco. Management points to the traffic management plan prepared as part of the Project and states that, the *“plan identified several alternatives and concluded that the implemented alternative would cause the least impact on the historical nature of Barranco.”*⁷³
205. While the Requesters believe that the impacts that the implementation of the Project will cause on Barranco are long-term in nature, Management stresses in its Response that these negative impacts are temporary and that a number of actions have been implemented to help mitigate them. Management maintains that *“the most important action to resolve the problems is to ensure that the Project becomes fully operational without additional delays.”*

⁷¹ The current World Bank policy on Physical Cultural Resources is OP/BP 4.11, dated April 6, 2006. As noted in Chapter 1, the policy applicable to this Project is OPN 11.03.

⁷² OPN 11.03, ¶ 3.

⁷³ Municipalidad de Lima-Protransporte. Estudio de Tránsito del Área Sur de Lima. TARYET. March 17, 2005.

206. The PAD states that the EAs analyzed the Project impacts on cultural heritage of Lima and determined that no sites would be affected. A review of the environmental assessments prepared under the Project showed that the SEA briefly mentions the “*physical deterioration of the monumental houses in the historic district of Barranco*,” among the potential negative impacts during construction phase. Likewise, the SEA includes impacts on the historical monuments in Barranco among the risks of Project operation. The 2003 SEA further proposes as a mitigation measure a study to deal with the impacts on the “monumental area.” The 2003 Environmental Assessment identifies Barranco as a historically and culturally important area but also notes that the construction of the Project will not have direct impacts on the cultural, architectural and archeological heritage. The 2003 also notes that impacts will be mostly indirect, and are not likely to occur.⁷⁴ The 2009 EA describes Barranco as a traditional, romantic and bohemian district. It also notes that Barranco is protected by the INC.
207. The Panel has reviewed the available documentation prepared under the Project to analyze whether impacts on cultural heritage in Barranco were adequately taken into consideration and whether measures to prevent or mitigate potential negative impacts were proposed. It is the Panel’s view that no adequate survey was prepared of historic 19th century buildings in Barranco. The Traffic Study provides a map of historic properties that includes at least 30 percent of the all the properties in the District, but does not clarify which ones are important. The Panel has found no adequate analysis of the historic neighborhood or monuments, nor of the potential impacts of the Project on them. As noted above the SEA and EA mention that the Project will have an impact but go no further in evaluating the nature and magnitude of the impacts. The SEA proposes that a study be carried out to address impacts in the historic area. **To the Panel’s knowledge, such a detailed study related to Barranco has yet to be carried out. The Panel finds that this is not in compliance with OPN 11.03 on Physical Cultural Resources.**
208. **The Panel notes that the lack of adequate studies of the impacts of the Project on cultural resources of Barranco is a serious matter as high traffic volume crossing the District may cause permanent negative impacts to its protected historic area.** Not only does the current traffic pattern increase traffic in the area significantly on Avenidas San Martín and Pedro de Osma but the additional traffic would also be through-traffic, not neighborhood traffic, and as a result faster and more aggressive traffic, mixed with neighborhood vehicular and pedestrian traffic. The Panel notes that the resulting traffic would reduce the livability of those avenues, at the same time raising their accessibility (and monetary value).
209. **In the opinion of the Panel, the Requesters’ concern that the increased traffic through Avenida San Martin would cause a loss of quality of the historic area is well founded. The Panel finds that the increase in traffic, leading to congestion through the community, was not adequately considered in assessing the impacts of the Project on**

⁷⁴ Environmental Assessment 2003, p. 27. From the Summary of the Environmental Assessment submitted to the Board of Executive Directors: “The culturally historical centers of both Lima and Barranco-Chorillos affected by the project are legally protected by the National Cultural Institute. The EIA does not predict that construction or operation to have a negative impact on any of these sites.”

the historic area. In addition, as noted above, the current traffic pattern was not the subject of an analysis of impacts as would be required under Bank policies. The Panel finds that the diversion of traffic through Avenida San Martin, rather than recommended by the 2005 Traffic Study, was carried out on an ad-hoc basis, without consultation with the interested community, without an analysis of the impacts on the cultural property of Barranco and without mitigation measures. **The Panel also finds that the EAs prepared under the Project do not mention the potential problems associated with the impacts of permanently re-routed traffic on buildings and public places of interest.**

Chapter IV: Systemic Issues and Lesson Learned

A. The Challenges of Addressing Adverse Impacts in High Priority and Generally Beneficial Infrastructure Projects

210. BRT systems allow cities to provide a high quality public transport system at reduced costs, with significant economic, social and environmental benefits. BRT projects therefore tend to be highly visible, and politically prized. The high visibility and generally beneficial nature of BRT projects like the Metropolitano de Lima create pressures that can challenge the Bank in its work to ensure that possible adverse impacts are properly assessed and its safeguard policies are properly implemented during both design and implementation.
211. In the case of the Metropolitano de Lima, the overall tenor of the EA seemed to have been influenced by the sense that the overall social, environmental and economic benefits far outweighed the harms which were regarded as temporary and limited to the construction phase. While the Panel's investigation was limited to only one segment of the bus corridor, the EA seemed to argue overall that the BRT would bring many benefits and only minor negative impacts of various natures, in general only vaguely identified. Indeed, recognition of the significant economic, social and environmental benefits of the Project appears to have had the effect of making the analysis downplay possible adverse effects to one of the affected communities, Barranco, and thus not fully fulfill one of the EA's key objectives fail to fulfill one of the EA's key objectives – to help prevent or reduce possible future harm in specific locations through the development of appropriate plans to avoid, mitigate or compensate for such adverse effects. This in turn meant that more time and effort had to be invested in the later stages of the Project in 'curative' efforts, which could have been avoided if more attention had been given to 'preventive' efforts in the early stages of the Project – particularly in those parts of the city such as Barranco that had a difficult geography and where potential future adverse effects should not have been difficult to foresee.
212. Similar attitudes seem to have prevailed during the implementation stage, at least initially. Two key beliefs seem to have dominated the Project, and increasingly so as the Project was delayed: that the Project was very important for Lima and its transport system and would create immense benefits, and that some opposition from the population was to be expected during construction but would quickly subside after the system started operating. From these two premises, the overall approach seemed to give priority to speed of execution, with what appeared to be a dismissive attitude towards external factors that might cause a delay. In addition, during both design and implementation, the politicization of the Project because of its popular value became a significant factor, and indeed the Panel was informed by many sources during its visit that Project-related decisions were often taken outside of the hands of those directly responsible for the Project. All this made supervision by the Bank extra challenging, and supervision resources may have not been adequate to address these challenges.

B. Professional and Institutional Capacity to Support Project Objectives

213. Several Panel investigations of other projects have found important shortcomings in meeting Bank policy requirements to properly assess and support the capacity of the borrower and the implementing body, in support of project objectives. While this investigation has not examined these issues in detail, the Panel observes that BRT systems are complex technical and social systems that need to be planned and managed carefully, and require effective urban transport institutions with skilled staff. Importantly, the skills required for the design and execution of BRT systems include those needed not only to address technical issues of engineering design but also to deal with social and environmental matters, such as stakeholder analysis, consultation with affected parties, and analysis of potential adverse social and environmental impacts.
214. During its visit, the Panel was informed by a range of stakeholders that professional and institutional capacity in urban transport management remains a challenge in Peru. Specifically, the Panel was informed that there is limited capacity for detailed implementation of complex systems such as the BRT and for attention to broader issues of environmental, social and historical/cultural aspects of sustainable urban transportation management. The Management Response also acknowledges that implementation and coordination capacity of Project agencies, especially in the environmental social management areas, needed significant strengthening at the time of Project initiation. Under these conditions, it was a challenge simply to get the technical job done. Not surprisingly, compliance with Bank safeguard policies proved problematic.

C. Recurring Patterns

215. One recurrent finding from other Panel investigations, and which appears to be an underlying problem in this case, relates to shortcomings in delineating a Project's area of influence. As discussed in the 2009 Report, 'The Inspection Panel at 15 Years', in several Projects investigated by the Panel, one or more specific Project-affected communities seemed to 'fall off the radar screen', with the result that the negative impacts of the Project on those communities were overlooked and not properly addressed as part of the Project's harm avoidance and mitigation elements. While the Panel's investigation was limited only to the one segment of the bus corridor in the District of Barranco, the Panel's findings suggest that an overly narrow delineation appears to have been a factor in this Project too. As detailed in the Panel's report, little attention was paid to assessing impacts and identifying harm that might take place beyond the bus corridor itself as a result of changes in traffic patterns, a shortcoming that had particular implications for the Barranco District, given its difficult geography and the fact that the Project would cause significant traffic rerouting. Had the Barranco community been 'on the radar screen' from the outset, later tension and conflict about this project could have been avoided and there would have been greater opportunities to avoid or mitigate harms.
216. Several other findings from this investigation resonate with Panel findings in other investigations. For example, the Panel's finding in this Project that supervision related to the District of Barranco was not consistently up to speed with events until Barranco residents

started to raise their complaints, is similar to the Panel's findings in its investigation of the Ghana UESP II and other Projects relating to Bank failures to identify and adequately respond to issues and problems as they emerged. Also, the Panel's findings relating to dissemination of information and consultation with the affected people in Barranco, especially in the early phases of the Project, is consistent with a recurrent set of findings in Panel investigations related to noncompliance with Bank policy requirements on consultation and disclosure of information.

ANNEX 1: Table of Findings

ISSUE	MANAGEMENT RESPONSE	PANEL'S FINDINGS
Project Appraisal		
Project Appraisal	<p>Management believes it has <i>“broadly met the requirements of the Bank’s Policy OMS 2.20 on Appraisal.”</i> It elaborates by stating that while the project fully met conceptual, economic, financial, and commercial aspects of OMS 2.20 during preparation and appraisal, the Project <i>“was not ready for implementation at the time of approval.”</i></p> <p>Management also states <i>“institutional capacity for environmental and social management was insufficiently developed at the time of Project approval”</i> and <i>“the Bank team could have intervened more forcefully”</i> to promote institutional strengthening.</p>	
Environmental Assessment		
Categorization of the Environmental Assessment	Management notes that the Project was categorized as Category B for purposes of Environmental Assessment as studies revealed impacts to be localized and temporary.	Panel agrees with Management that Project’s potentially adverse environmental impacts on human populations or environmentally important areas were not such as to warrant “Category A” investigation. Panel agrees with this judgment and finds that Project was correctly categorized as B, in compliance with OP/BP 4.01. Panel notes however some shortcomings in environmental studies, especially with respect to analysis of alternatives and depth of analysis of Project’s impacts on Physical Cultural Resources and impacts on traffic re-routing in Barranco
Negative Project Impacts on Barranco as a historical and “monumental” area of Lima.	Management accepts that OP 4.01’s (Environmental Assessment) requirements regarding mitigation of <i>“residual adverse impacts has not been fully met”</i> stating that <i>“some measures designed to mitigate temporary increases in congestion, such as installation of traffic signals, were poorly implemented.”</i>	Panel finds that Environmental Impact Assessment reports related to south corridor seem to have been carried out with acceptable diligence regarding certain items in assessments, e.g. impact evaluations on issues such as air quality and noise, and that mitigation measures identified to deal with impacts are adequate. In this respect reports

ISSUE	MANAGEMENT RESPONSE	PANEL'S FINDINGS
	<p>Management believes that the once operational the Metropolitano is expected to improve transport conditions in Barranco.</p>	<p>comply with OP 4.01 on Environmental Assessment.</p> <p>Panel finds however that there was little concern and analysis of impacts on issues such as pedestrian flows, vehicular traffic re-routing, and economic livelihoods. Studies are also inadequate as to analysis of Project's impact on historical heritage and cultural value of Barranco and its vulnerability to significant traffic flows in proximity of historical buildings.</p> <p>Panel finds that analysis of potential adverse impacts of Project and identification of mitigation measures fall short of meeting requirements of OP 4.01 as far as analysis concerns District of Barranco.</p>
<p>Analysis of Alternatives</p>	<p>Management argues in its Response that a thorough analysis of alternatives was conducted during Project preparation to identify the alternatives that would cause the least impacts, in accordance with OP 4.01. Management acknowledges however that disclosure of relevant studies and plans did not always meet the policy's requirements.</p>	<p>Panel notes that a review of environmental assessments prepared for Project reveal that these alternatives were not studied in sufficient depth to be able to assess their technical feasibility and cost. It is not clear to Panel to what extent these options were put forward for consideration in environmental assessment. Panel observes that attention to these alternatives as well as adequate consultations with Barranco residents during decision-making process could have avoided tensions and strong opposition to Project that resulted in Request for Inspection to Panel.</p>
<p>Consultation and Dissemination of Project Information with Barranco Residents</p>	<p>Management notes that after that after the 2003 EIA was made public "<i>efforts were made to consult widely</i>" however, "<i>these were not always fully satisfactory.</i>" Management agrees that the Project has not met fully the requirements of policies and procedures related to consultation and grievance mechanisms.</p>	<p>Panel finds that dissemination of information and consultation with affected people in Barranco failed to meet requirements of OP 4.01, especially in early phase of Project and during a good part of Project implementation. Only when residents began voicing concerns in a more</p>

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	<p>In the Response, Management acknowledges that with respect to the information and consultation program <i>“the Bank team could have intervened more forcefully”</i> and that it <i>“could have deployed Bank environmental and social specialists more systematically during the early stages of Project implementation.”</i> Since late 2007, however, social and environmental specialists were part of the supervision team and social and environmental specialists are also assigned to the Bank office in Lima.</p>	<p>organized fashion were concerns taken into consideration and a number of actions taken to hear views and address concerns.</p> <p>Panel notes that failure of consultation likely has had important consequences in present case. Lack of adequate consultations, particularly during critical design phase of Project, appears to have contributed to later tension and conflict about this important project for City of Lima.</p>
<p>Project did not Respond to the Requesters' Concerns (Inadequate Supervision)</p>	<p>Management is of the view that Project supervision has <i>“partially met”</i> the requirements of OP 13.05 (Project Supervision). Management observes that the Project is a <i>“highly complex endeavor”</i> and that Bank staff <i>“made progressive efforts to meet the standards set by OP 13.05.”</i> Though a 2006 Quality of Supervision Assessment rated supervision as <i>“moderately satisfactory,”</i> more recent Bank efforts, particularly in light of the problems raised, have been proactive and robust.</p> <p>Management told the Panel that it intends to recommend the “Mesa de Diálogo” restart once the new traffic management study is completed.</p>	<p>Panel notes that project level grievances system has potential to be important avenue for residents to present grievances and have issues addressed, but notes that to do so effectively requires a functioning office.</p> <p>Panel finds that supervision of Project implementation did not ensure Project affected people were adequately informed and consulted on Project and its potential impacts until end of 2008, when problems started to emerge in Barranco as construction of Metropolitano progressed. Panel finds, however, since 2008, Project supervision has been more active in addressing complaints and reacting to emerging issues in compliance with Bank Policy on Project supervision.</p>
<p>Environmental Assessment Process not Approved by Competent Peruvian Authority</p>	<p>Management believes that the Bank met OP 4.01's requirement that a Bank-financed project <i>“take into account ... national legislation”</i> (OP 4.01, paragraph 3) and notes that the Bank was aware, during appraisal, that the Peruvian legal framework for EIA approval was <i>“unclear.”</i></p> <p>Management states that the question of whether the environmental approval</p>	<p>Panel concurs with Management that it would a matter for Peruvian courts to decide whether Municipality of Lima was competent authority to approve EIA based on legislation in force. Panel finds, as a matter of due diligence and based on OMS 2.20, issue should have been part of appraisal of Project and as such reported in PAD. This did not happen and is not in compliance with OMS 2.20. However, Panel also notes</p>

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	process complied with national law is a matter for the Peruvian legal system to decide if a case is formally submitted.	supervision missions discussed and raised issue with authorities early in Project implementation and well before construction began. As noted above, Bank also requested a legal opinion on matter. Panel finds during implementation Management acted with due diligence in compliance with OP/BP 13.05.
Traffic Issues		
Traffic Management Study and Plan	<p>Management believes that Barranco's traffic problems are "<i>in large part unrelated to the Metropolitano</i>" and are due to the increase in vehicular traffic in general and the existence of commercial and high rise buildings in the District.</p> <p>Management acknowledges, however, that the construction phase of the Project "<i>exacerbated traffic problems in Barranco.</i>" In Management's view, this was because of the re-routing of traffic away from Avenida Bolognesi onto other streets, the decision by Protransporte to maintain the southbound re-routing as permanent, and the lack of synchronization of the traffic signals. Management believes traffic conditions in Barranco will improve once the Metropolitano becomes operational. Management concludes by noting that though most of the "<i>negative impacts caused by the Project are temporary</i>" permanent negative impacts will not be known until the Project is fully operational.</p>	<p>2005 Traffic Study offered opportunity to evaluate permanent impacts of Project on traffic patterns in Barranco and to devise adequate measures to mitigate them. Panel finds, however, 2005 Traffic Study contains number of weaknesses in its analysis, and as result falls short of meeting requirements of OP 4.01, especially with respect to depth of evaluation of impacts Project may cause on traffic conditions in Barranco.</p> <p>Panel found no record indicating when 2005 Plan was changed to adopt existing solution, nor did it find any analysis of new alternative and its impacts. This is not in compliance with OP 4.01 on Environmental Assessment.</p>
Negative Socio-economic Impacts: Street Micro-Design and Pedestrian Issues	<p>Management's position is that the Project will reduce rather than exacerbate the barrier effect created by Avenida Bolognesi because the number of buses will be lower than before and crossing the avenue will be safer both for pedestrian and cars.</p> <p>Management added that a new system of</p>	<p>Fact that awkward design was not reviewed with community and does not appear in principal reports of project documentation is not consistent with OP 4.01 on Environmental Assessment.</p> <p>Sidewalk conditions are of considerable concern for community. As noted above, it seems solutions were adopted</p>

ISSUE	MANAGEMENT RESPONSE	PANEL'S FINDINGS
	<p>traffic signal was to be implemented to allow better operations of the intersections.</p> <p>The Project eliminated an inter-district space known as the Óvalo Balta, replacing it with an intersection, <i>“making communication between Barranco and Surco more difficult but not blocking it.”</i> Management states this was done to improve the <i>“flow of the mass transit system.”</i></p>	<p>on site rather than after careful review of possible alternatives. In conversation with residents it became clear that community never saw drawings at this level, which would have been very important to understanding of conditions of pedestrian and other movements after construction. This constitutes an important lapse in communication with community, and is not in compliance with OP/BP 13.05 and OP 4.01.</p>
<p>Inadequate Response to Traffic Management Concerns (Supervision of Traffic Management)</p>	<p>Management believes that Project supervision has <i>“partially met”</i> the requirements of OP 13.05). Management observes that the Project is a <i>“highly complex endeavor”</i> and that Bank staff <i>“made progressive efforts to meet the standards set by OP 13.05.”</i></p> <p>Management indicated that it noted and monitored the traffic problems in Barranco as part of its supervision activities, and as a result included in the March 2009 supervision mission a traffic specialist. According to the Response, the specialist concluded that the 2005 traffic management plan was of <i>“high quality.”</i></p>	<p>Panel finds supervision of Project activities in District of Barranco was not consistently up to speed with events and circumstances on ground between 2007 (when construction works started and traffic detours became necessary) and 2009 when Barranco residents started to raise complaints.</p> <p>However, Panel also finds once problems were identified in 2009 as result of residents' complaints and related monitoring of situation in the context of supervision missions, supervision activities strengthened and number of actions were taken, including contracting traffic specialist and proposing new traffic management study. Panel finds this is in compliance with OP 13.05 on Project Supervision, which requires Bank Staff to identify problems promptly as they arise and to recommend ways to solve them, as well as to recommend changes in the project concept as appropriate as Project evolves.</p> <p>Panel also notes Bank Management facilitated creation of round table (<i>“Mesa de Diálogo”</i>), where traffic problem was discussed between Protransporte and residents of Barranco, in order to find short and long-term solutions to issue. Panel finds</p>

ISSUE	MANAGEMENT RESPONSE	PANEL'S FINDINGS
		<p>that this meets supervision requirements of OP 13.05.</p> <p>Panel commends Management for efforts made to address the concerns of Requesters regarding traffic conditions in Barranco by proposing, among other things, new traffic management study. According to its Terms of Reference (TOR), study would analyze and compare different alternatives, including alternative proposed by residents of Barranco. Panel finds that Management's supervision of Project, with respect to efforts made to address traffic problem, is currently in compliance with requirement of Bank Policy on Project Supervision.</p> <p>Panel is also encouraged by recent indications from Management that Project now is committed to reviewing not only short-term but also medium/longer term options to address issues and shortcomings, including options noted above. Panel notes importance of review - and of engagement by affected people - to community in Barranco. In this regard, Panel notes that Mesa de Diálogo, which was interrupted in February 2010, was to be reconvened in 2011 with a new facilitator.</p>
Physical Cultural Resources		
Negative Impact on Barranco's Historic Architectural District	<p>Management states that <i>"the requirements of OP 4.11 on Physical Cultural Resources have been met"</i> as the Project complies with local law and institutions and impacts on cultural resources and historical sites have been minimized. The National Institute of Culture (Instituto Nacional de Cultura, INC) has oversight of the Project. Management believes that the Project <i>"has not caused irreparable harm to the</i></p>	<p>Panel has found no adequate analysis of historic neighborhood or monuments or of potential impacts of Project on them. As noted SEA and EA mention that Project will have impact but go no further in evaluating nature and magnitude of impacts. SEA proposes that study be carried out to address impacts in historic area. To Panel's knowledge, such detailed study has yet to be carried out. Panel finds this is not in compliance</p>

ISSUE	MANAGEMENT RESPONSE	PANEL'S FINDINGS
	<p><i>architectural heritage of the District.”</i></p> <p>Management stresses in its Response that these negative impacts are temporary and that a number of actions have been implemented to help mitigate them. Management maintains that <i>“the most important action to resolve the problems is to ensure that the Project becomes fully operational without additional delays.”</i></p>	<p>with OPN 11.03 on Physical Cultural Resources.</p> <p>Panel notes that lack of adequate studies of impact of Project on cultural resources of Barranco is a serious matter, as high traffic volume crossing District may cause permanent negative impacts to protected historic area.</p> <p>In opinion of Panel, Requesters' concern that increased traffic through Avenida San Martin would cause loss of quality of historic community is well founded. Panel finds that increase in traffic, leading to congestion through community, was not adequately considered in assessing the impacts of Project on historic area.</p> <p>Panel also finds that EAs prepared under Project do not mention potential problems associated with impacts of re-routed traffic on buildings and public places of interest.</p>

ANNEX 2: Biographies

Panel Members

Mr. Roberto Lenton (Argentina) was appointed to the Panel in September 2007 and became its chair in November 2009. He earned a civil engineering degree from the University of Buenos Aires and a Ph.D. from the Massachusetts Institute of Technology (MIT). A specialist in water resources and sustainable development with more than 30 years of international experience in the field, he serves as chair of the Water Supply and Sanitation Collaborative Council and member of the board of directors of WaterAid America, and served until July 2009 as chair of the technical committee of the Global Water Partnership. Mr. Lenton is a coauthor of *Applied Water Resources Systems* and coeditor of “Integrated Water Resources Management in Practice,” and a lead author of *Health, Dignity and Development: What Will it Take?*, the final report of the United Nations Millennium Project Task Force on Water and Sanitation, which he co-chaired. Earlier, Mr. Lenton was director of the Sustainable Energy and Environment Division of the United Nations Development Programme in New York, director general of the International Water Management Institute in Sri Lanka, and program officer in the Rural Poverty and Resources program of the Ford Foundation in New Delhi and New York. He has served as adjunct professor in the School of International and Public Affairs at Columbia University and assistant professor of civil and environmental engineering at MIT.

Mr. Alf Jerve (Norway) was appointed to the Panel in November 2008. Mr. Jerve brings to the Panel close to three decades of work in the field of development. A social anthropologist by training, he has been engaged in a wide range of development activities, including extensive field research in Africa and Asia. Among his assignments was a three-year posting to Tanzania with the Norwegian Agency for Development Cooperation as coordinator of a rural development program. From 1993 to 1995, he was responsible for resettlement and rehabilitation issues with projects in Bangladesh during an assignment with the World Bank. In 1995, he became Assistant Director, and served as Director in 2005 and 2006, at the Christian Michelsen Institute in Norway, an internationally recognized development research institution, where he has also devoted his energies and expertise to research and analysis of a wide variety of policy and program issues affecting people in developing countries. Over the years, Mr. Jerve has led and participated in numerous independent evaluations commissioned by bilateral and multilateral development agencies, and served as a member of the Roster of Experts for the Asian Development Bank’s Inspection Function. He earned his magister degree in social anthropology from the University of Bergen, and his bachelor’s degree is in the areas of environmental science and biology. His publications have focused on rural development, decentralization, and poverty reduction and most recently on issues of ownership in development aid cooperation.

Ms. Eimi Watanabe (Japan) was appointed to the Inspection Panel on November 1, 2009. Throughout her career, Ms. Watanabe has demonstrated a commitment to applying analytical as well as participatory approaches to development programs, and a strong track record of working collaboratively with civil society organizations, governments, and other development organizations. A sociologist by training, she has been involved in a wide range of substantive areas, at both the project and policy levels, including poverty reduction, governance, gender, child health and nutrition, capacity development, environment, and international migration. Ms. Watanabe earned a M.Sc. and Ph.D. from the London School of Economics and received a B.A.

in sociology from the International Christian University in Tokyo. From 1998 to 2001, she served as assistant secretary general and director of the United Nations Development Programme (UNDP) Bureau for Development Policy. Prior to that, she was UN resident coordinator and UNDP resident representative in Bangladesh, and UNICEF Representative in India. Recently she has served as a member of the Strategic and Audit Advisory Committee of the United Nations Office for Project Services. Ms. Watanabe brings to the Panel more than 30 years of experience in the field of development.

Expert Consultants

Dr. Ralph Gakenheimer is Professor Emeritus of Urban Planning at the Massachusetts Institute of Technology. He is a Fellow of the American Institute of Certified Planners, and Chair of the Committee on Developing Countries of the Transportation Research Board of the U.S. National Academy of Science. He has published over 100 papers on urban transportation in rapidly motorizing and urbanizing cities. His new edited book *Urban Transport in Developing Countries: A Handbook of Policy and Practice*, co-edited with Prof. Harry Dimitriou, will be published in early 2011 by Edward Elgar Press. He has been consultant in transportation studies in many countries, including Colombia, Chile, Costa Rica, Ecuador, Egypt, Thailand and Saudi Arabia. His education was in engineering science and urban planning at the Johns Hopkins University, Cornell University, the University of Pennsylvania and the National Engineering University of Peru.

Professor José Viegas is a Full Professor of Transportation at the Civil Engineering and Architecture Department of the Instituto Superior Técnico, Technical University of Lisbon. He has worked extensively in modeling, innovation and policy in several types of transport systems, and particularly in several aspects of Urban Mobility. He has invented and applied the concept of Intermittent Bus Lane, and was responsible for the 2005 Mobility Study for Lisbon, and for an OECD study on Organization and Financing of Urban Public Transport. He was founder and first Director General of Transportnet, a group of 8 leading European Universities with Advanced Studies in Transportation, and currently leads the Portuguese side of the Transportation Systems area in the MIT – Portugal program.