



**PROJECT DEVELOPMENT FACILITY
REQUEST FOR PDF BLOCK A FOR FSP**

UNDP PROJECT INITIATION DOCUMENT



AGENCY'S PROJECT ID: PIMS 3518
 GEFSEC PROJECT ID:
 COUNTRY: NICARAGUA
 COUNTRY ELIGIBILITY: The Government of Nicaragua ratified the UNFCCC in October 1995
 PROJECT TITLE: Promotion of Environmentally Sustainable Transport for the capital city of Managua, Nicaragua
 GEF AGENCY: United Nations Development Programme (UNDP)
 OTHER EXECUTING AGENCY (IES):
 DURATION: 4 months
 GEF FOCAL AREA (S): CLIMATE CHANGE
 GEF OPERATIONAL PROGRAM (S): OP11 - Promoting Environmentally Sustainable Transport
 GEF STRATEGIC PRIORITY (IES): CC-6: Modal shifts in urban transport and clean vehicle/fuel technologies
 ESTIMATED STARTING DATE: April 2005

FINANCING PLAN (US\$)	
GEF PROJECT	
PDF A	25,000
<i>Sub-Total GEF</i>	25,000
CO-FINANCING	
GEF Agency	UNDP
National Contribution	
In Cash	
In Kind	5,000
Others	
<i>Sub-Total Co-financing:</i>	5,000
<i>Total PDF Financing:</i>	30,000

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

José Santos Mendoza Date: April 6, 2005
 Secretario General
 Ministerio del Ambiente y los Recursos Naturales
 (MARENA)

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

Yannick Glemarec
 Deputy Executive Coordinator
 UNDP-GEF

Date: April 13, 2005

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List of Acronyms

PND	Plan Nacional de Desarrollo (National Development Plan)
IRTRAMMA	Instituto Regulador del Transporte del Municipio de Managua (Managua's Municipality Institute of Transport Regulation)
MARENA	Ministerio del Ambiente y Recursos Naturales (Ministry of Environment and Natural Resources)
CNCC	Comisión Nacional de Cambio Climático (CC National Commission)
UNI	Universidad Nacional de Ingeniería (National University of Engineering)
INETER	Instituto Nicaragüense de Estudios Territoriales (Nicaragua Institute of Territorial Studies)
PNUD	Programa de Naciones Unidas para el Desarrollo (UNDP)
UNFCCC	United Nations Frame Convention on Climate Change
IDB	Inter-American Development Bank
GHG	Greenhouse gases

1. Global Significance + Problem Statement

1. The Operational Strategy of the GEF in the Climate Change focal area initially emphasized three Operational Programs that address *long-term* program priorities of UNFCCC to *mitigate* climate change. The fourth Operational Program in the climate change focal area promotes the long-term shift towards low emissions and sustainable transport forms. In 1990, the transport sector accounted for a quarter of the world's primary energy use and three fifths of oil products use. Reduced emissions of greenhouse gases (GHGs) from this sector will be essential for stabilizing GHG concentrations. Widespread shifts towards modes that result in low emissions offer some of the best prospects globally for achieving deep reductions in greenhouse gas emissions over the next century while satisfying a given demand for mobility.
2. Both because of the magnitude of greenhouse gas emissions from the transport sector and because of recipient country demands to address those emissions necessitate that GEF respond to curtail greenhouse gas emissions. The complexity of the transport sector coupled with the difficulty in achieving breakthroughs given the realistic level of resources available to GEF to devote to the transport sector necessitate a selective and catalytic approach.
3. Building upon the City of Managua's priorities, the GEF project will provide financing for initiatives that ensure that the city's transportation program considers global environmental issues and long-term environmental sustainability. The Municipality's commitment to addressing Managua's transport problems will result in substantial on the ground investment, policy reforms, and institutional restructuring.
4. The GEF will contribute to the overall project by promoting an integrated approach to the problem that addresses global environmental concerns in the context of the city's needs, thus resulting in an overall reduction of GHG emissions. This intervention falls under the new strategic priorities of the GEF, specifically under operational programme 11 "Promoting environmentally sustainable transport" and SP#6: "Modal shifts in Urban Transport and Clean Vehicle /Fuel Technologies".

2. Project Linkage to National Priorities, Action Plan and Programmes and CP/GCF/RCF, CCA and UNDAF situation analysis

5. The Project is intended to contribute to promote an environmentally sustainable transport system for the capital city of Managua.
6. In the National Development Plan (PND) proposed and presented by the government in the year 2004, an ambitious infrastructure program is proposed, as a fundamental step for the country to enhance its competitiveness, economic development social well being. Therefore, within the plan, a number of activities take high priorities, such as the construction of new highways and roads.
7. ***The Integral Transport Plan for the City of Managua, developed in 1999, recommends that the city needs to adopt a general policy towards the transformation of a city based on public transport, and recommends the Busway as one of the most important projects for the improvement of public transport and highways.***
8. Managua, the capital city of Nicaragua, has an estimated population for the year 2005 of 1.3 million inhabitants, and an annual population growth rate of 2.8%. The urban area of the municipality of Managua holds 25% of the total population of the country. The city has a population density of 364 inhabitants per square kilometer. Managua's Municipality extends over the south shore of the

Managua Lake, and has an overall extension of 540 square kilometers. The urban area of the city occupies 289 square kilometers. The city has experienced a rapid and disorganized population urban growth. Over 70% of the country's industries.

9. The road network in the country consists of 18,712 kilometers, but only around 2,000 kilometers have appropriate traffic signals. Only in Managua, there is a strong deficit of over 9,000 traffic signals in the main streets and intersections. This problem, in addition to the lack of vial education of drivers are the main causes for the high level of annual vehicle accidents, which causes at least one death per day. The vehicle park at the national level is around 252,000 vehicles, and of those, 170,000 circulate in Managua. That is, around 67% of registered vehicles concentrate in the capital city. According to studies carried out in 1998, the average of vehicle property for the municipality is over 20% in terms of houses, indicating the relationship between income level and vehicle property.
10. The accelerated growth of vehicle park; insufficient traffic signals, and lack of vial education, characterize the streets of Managua, which turns it into the Central American capital city with the most problems for traffic and mobilization for drivers and pedestrians. The city of Managua has important structural problems and operational difficulties in its public transport system, which in turn causes deficient service and quality, high index of accidents, and reduced quality living for its inhabitants. The present public transport is anarchic, and has low control capacity over the quality of service, and lack of entrepreneur capacity.

3. Stakeholders and Beneficiaries involved in Project

Managua Municipality

11. The Municipal government of Managua (Alcaldía de Managua) has a set of attributions according to the Law of Municipalities, some of them are:
 - a. The control of urban development and land use.
 - b. Protection of the environment and urban landscape
 - c. Garbage collection, public areas care, and treatment of solid wastes
 - d. To contribute to the construction and maintenance of municipal roads.
12. The Municipality has a Department of Planning, which is responsible for establishing in a coordinated manner, the institutional action plans and annual plans within the limits of the available resources, and in correspondence with urban development plans and with planning guidelines. The Municipality also has a Department of Environment, which among its functions has the development of studies related to environmental conditions in Managua, in order to monitor and prevent environmental pollution. Also, it carries environmental education campaigns, directed towards the protection of the environment, and it has the authority (shared with the Ministry of environment and natural resources) to apply regulations and control mechanisms to regulate environmental impacts originated by contamination from different sources.

Institute for the Regulation of Transport for the Managua Municipality (IRTRAMMA)

13. The Institute for the Regulation of Transport for the Managua Municipality (IRTRAMMA, its acronym in Spanish) is a decentralized administrative entity with its own legal framework, and appointed at the Managua Municipality. Among its main objectives are the regulation and control of the service of public transport both within and between municipalities in Managua. Also, its

responsibility is to contribute to the development of a public transport service that is safe, efficient and with adequate quality.

Ministry of Environment and Natural Resources (MARENA)

14. The Ministry of Environment and Natural Resources is the government institution in charge of conservation, protection and sustainable use of natural resources and the environment. To attain its objectives, MARENA formulates, proposes, coordinates and monitors the enforcement of national policies on environment, as well as the laws, regulations and standards for environmental health and for the sustainable exploitation and use of natural resources.
15. Among other functions, MARENA monitors and gives follow-up to the different international conventions related to the environment and natural resources, in coordination with other government institutions. Due to the inter-disciplinary nature of the issues relating to climate change, there has been a strong and close coordination between MARENA and the Institute for Territorial Studies (INETER). MARENA has created the National Office for Climate Change within the institution, as well as an information center in climate change.

National Committee on Climate Change (CNCC)

16. The National Committee on Climate Change was created in 1999 (by the Ministerial decree No.014-99), and was formed as the main government instrument for management and execution of activities related to the national application of the convention on climate change.
17. The Committee was created as a consulting body among the Ministry of Environment and Natural Resources MARENA and other institutions and sectors in the country. The Committee is presided by MARENA, and is integrated by other important institutions such as INETER, The Ministry of Agriculture (MAGFOR), The Institute of Energy (INE), the Ministry of Foreign Affairs (MINREX), and the Central Bank (BCN), as well as representatives of the private sector, civil society and universities. There is also a plenary commission where more representatives of the private sector participate, from the economic sectors: energy, industry, forestry, agriculture and health.

National Engineering University (UNI)

18. The National University of Engineering (UNI) has an independent and affiliated Research Center called the center for Research and Studies on Environment (CIEMA), whose purpose is to generate, transfer and promote knowledge and technologies on environmental topics, thereby contributing to human sustainable development of the country.
19. CIEMA gathers different experiences in environmental areas, which have been coordinated through the Center with the cooperation of international agencies. This has permitted for the Center to gain valuable experience and to be the most specialized research center in the country for topics of urban environmental topics.
20. Some of their most relevant studies in the country have been for example: the mapping and survey of pollutants in different points of the capital city, developed with Swiss Contact. With this experience they gained the training of their personnel, as well as the donation of all the specialized equipment to carry out analysis and monitoring of air quality and air pollutants. Government institutions have used the results of this important study. In coordination with MARENA they carried out the Study of Greenhouse Gases, and most recently, with the Municipality of Managua, the Study of the Survey of Pollutants in the city of Managua.

4. Rationale for GEF Involvement and Fit with GEF Operational Programmes and Strategic Priorities

Environmental Pollution in Managua

21. Nicaragua has signed the United Nations Frame Convention on Climate Change, and has tried to fulfill its obligations as a party country in this treaty. Within this framework, it was created in 1999 the National Committee on Climate Change as a consulting body among the Ministry of Environment and Natural Resources MARENA and other institutions and sectors in the country. The Committee is presided by MARENA, and is integrated by other important institutions such as INETER, The Ministry of Agriculture (MAGFOR), The Institute of Energy (INE), the Ministry of Foreign Affairs (MINREX), and the Central Bank (BCN), as well as representatives of the private sector, civil society and universities. There is also a plenary commission where more representatives of the private sector participate, from the economic sectors: energy, industry, forestry, agriculture and health.
22. Nicaragua prepared its First National Communication to the Convention in 2001, where the National Survey of Greenhouse Gases was presented. Also, the assessment of the impact of climate change was prepared, and analyzed for the sectors of hidroenergy, forest resources, and human health. A National Plan of Action for Climate Change was also developed as part of the Report.
23. One of the main causes of mortality and morbidity among children and elder people in the city are respiratory diseases, such as bronchitis, asthma and infections with carcinogenic effects, as byproducts of toxic gases produced by vehicles, especially those with bad technical conditions and lack of regular maintenance.
24. The first survey in the country about sources and links of greenhouse gases was prepared with 1994 as the reference year. The total of CO₂ emissions in the energy sector was 2,373.54Gg, emitted by the following sub sectors: the energy industry (902.62), manufacturing industry and construction (368.94), transport sector (841.57), commercial, institutional and public (150.9), and agriculture, residential and others.
25. It is worth to mention that the transport sub sector accounted for 35% of the total emissions of the energy sector, occupying the second place after the energy industry that accounts for 38% of the total, and followed by the manufacturing industry and construction sub sector which represents 16%.
26. The first study of air pollution and monitoring initiated in 1996 and lasted three years, and it was developer through an institutional agreement between the National Engineering University (UNI) and the Ecological Project for Central America (ProEco). Seven different sites in the city were chosen for air pollution measurements. Pollutants surveyed included: NO², PM₁₀, Ozone and Lead. The highest NO² concentration was found in the month of October, and the annual average pollution was 40 micrograms/m³, but it still did not reach the forecasted limit (100microgramos/m³). The highest concentration of ozone was registered in December, and the lowest in July. The annual average was higher than the forecasted limit (88microgramos/m³). The annual average concentrations of atmospheric lead were below the proposed limit values (1.0microgramos/m³). This might be due to the compliance of the national oil refinery of not using tetraethyl lead (TEL) since 1996. The table below shows the average results of the Study of Air Pollution by ProEco.
27. Another study in parallel, conducted by the Institute of Energy (INE) was to determine the presence or not of lead in gasoline sold in Nicaragua. The results shown up to date are that the levels of lead in gasoline are way below the permitted limits.

Table 1. Average pollution values for the city of Managua (1996)

	NO ²	O ³	Rain acidity (Ph)	Pb *
Min. value	17	73	3.8	< 0.70
Max. value	58	97	6.6	<0.80
Average Yr. 96	40	88	5.1	<0.72

Source: "Monitoreo de la calidad del aire de la ciudad de Managua, Informe Anual 1996", *In*: "Plan Integral de Transporte y vialidad del municipio de Managua", JICA 1999

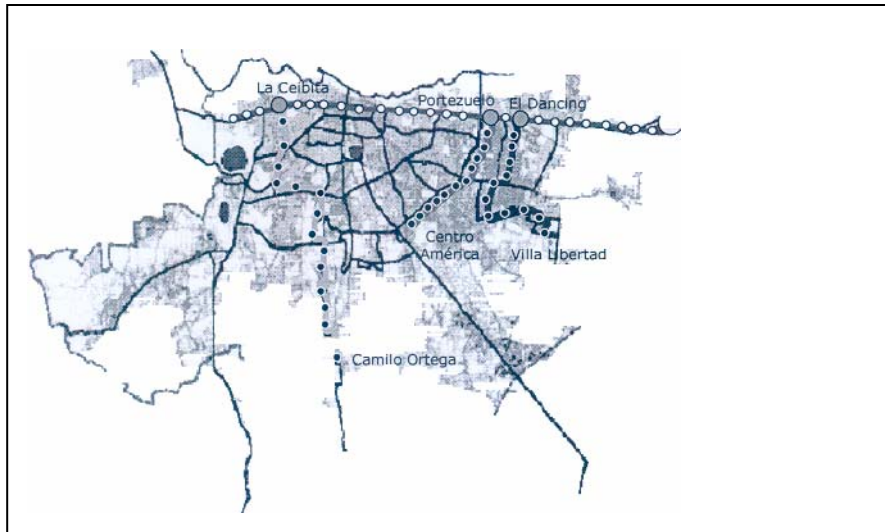
28. Air quality in the city can be evaluated as non-critical, according to the results of the survey carried out, and based on the existing information. However, it can be expected that as the number of vehicles increase in Managua, the level of air pollutants will increase, especially if there are no changes in vehicle maintenance standards and control. Vehicles will come around to be the major source of air pollution in the city. Moreover, there is a need to update the air pollution monitoring, because the information available is already nine years old. Even though the situation is not critical, continuous monitoring is needed, to implement corrective measures.
29. The General Law of the Environment and Natural Resources, in its article 111 and 122, dictates to develop standards of pollutant gases, so that the population has the right to live in a healthy environment, and that it is the obligation of the government the conservation, and restoration of the environment and natural resources, according to the constitutional mandate.
30. In response to these articles in the law, the government developed the Regulation for the Control of emissions from motorized vehicles in Nicaragua (Decree 32-97), and in this regulation it creates an inter-institutional committee as a coordinating program, integrated by representatives from government and non-government institutions.
31. As a follow up of this decree, there was a control program, which started in 1999. For vehicles to get both the car plate as well as the circulation permit for vehicles, it was mandatory for the vehicle to undergo an inspection: if the vehicle was in good state, a gas emission certificate was extended, as guarantee that it was a non-pollutant vehicle. The standards for gasoline-operated vehicles that were on the road since January 1998, is that they should not emit carbon monoxide in quantities over 4.5% of the total gas volume, or carbon dioxide in quantities lower than 10.5% of the total gas volume. Also, there was a process for certifying new vehicles coming in the country, and there has been over 68,000 certifications of new vehicles over the past three years.

Urban Transport in Managua

32. According to IRTRAMMA reports, in Managua there are approximately 9,800 units of public transportation, 1,200 are buses of collective transport, 8,000 are taxis, 800 are small transport vehicles, and 300 are school buses. The public transport is formed of the urban collective transport (buses) and the taxis system. The buses collective system is made up of two enterprises, and 25 cooperative enterprises. There are a total of 34 bus routes, which transport in total an average of 700,000 passengers per day. The number of trips generated in one weekday is almost 2,5 millions, and of those, 95% are residents of Managua, and 5% non-residents. 92% of the trips are carried out inside the city limits, and 8% are trips cross the city limits. The length of the bus routes is between 10 and 26 km.
33. The Managua Municipality, through the Institute for the Regulation of Transport (IRTRAMMA), regulates the transport systems. The city of Managua has structural and operational problems in its public transport system, which has caused a very deficient quality in the service, a high risk of accidents. The main causes of the transport problems reside in the lack of technical and economical resources to implement adequate planning, regulation and control of the transport on behalf of the

municipal authorities. The availability of public transport has been pointed out as one of the most sensible issues to be considered by the government in the interest of social well-being.

34. Since 1998, a number of studies have been developed, in order to find alternative solutions to the public transport system. Two main studies have been:
 - The Integral Transport System of Managua Municipality. Developed with the cooperation of the Japan International Cooperation Agency, in 1999.
 - The Feasibility Study of the Busway Municipal System for Managua, financed through the Interamerican Development Bank and developed by a consulting group, EPYPSA-CORASCO, in July 2001.
35. Besides these studies the Municipal authorities, through IRTRAMMA, have developed additional studies and diagnostic information that characterize the real conditions and structure of the transport industry in Managua, such as the number of passengers, and analysis of the possible scenarios for transport fares.
36. UNDP National Program contributed to the updating of the Busway study, through the hiring of the consulting firm AKIRIS, which updated the feasibility study from EPYPSA-CORASCO, and it also developed a plan of action for the implementation and definition of a first stage of the Busway called the north corridor.
37. ***The Integral Transport Plan for the City of Managua, developed in 1999, recommends that the city needs to adopt a general policy towards the transformation of a city based on public transport, and recommends the Busway as one of the most important projects for the improvement of public transport and highways.***
38. As a result of the abovementioned studies, the government concluded on the need to implement a new transport system based on the design of a network of special roads or Busways. The proposed system for the city of Managua is based on the need to implement a solution that offers a level of service according to the needs of the population, for it to be sustainable over time and that generates many positive impacts for the city, all of them reflecting in an improved overall quality of life. Moreover, the provision of an adequate institutional and infrastructure framework, as well as the financial sustainability must be reinforced.
39. It is considered a great advantage of the city of Managua, that there is a good availability of open spaces for the construction and expansion of highways, as well as the existence of big open green spaces, to develop ways for non-motorized vehicles, bikes and pedestrian streets, all of which contribute in turn to a more sustainable and healthy environment.
40. The new model proposed, from the operational point of view, proposes to develop dedicated and new infrastructure for the public transport, through the construction of troncal corridors, and integrating them with feeding routes, and the construction of fixed bus stops. The new system is supposed to be operating with high capacity vehicles, designed with the highest standards of security and lowest environmental impact. In a first stage to be developed as the North Corridor, it will consist of 25 bus stops and 3 feeding routes as illustrated in the figure below.



41. The sum of all the Studies as well as the final proposal presented by the consulting firm, constitute the basis for a Project named the transformation of public transport in the north corridor for the city of Managua. The implementation period is estimated to last 32 months divided in two phases: 1- the preparatory phase that lasts 10 months, and 2-the implementation phase lasting 22 months. The global costs of the Project have been estimated in \$49 million dollars. The viability of the project and the economic model requires a subscription of a main loan facility for the total financing of the system investments. The Government of Nicaragua will subscribe a concessional loan for a total amount of \$49.4 million dollars with a multilateral agency (IDB). This loan would be taken under special conditions established for the government of Nicaragua, which are a 40 years loan, with a 10-year grace period, paying a 1% interest, and the 30 following years with payments to principal at an annual 2% interest rate on balance.
42. With the implementation of the new system, many positive impacts have been described directly and indirectly for the population:
 - i. A decongestion of traffic in the city in general
 - ii. Reduced time of travel for workers
 - iii. Improved productivity and competitiveness of business and industries in the city and the country
 - iv. Improvement of social well-being and quality of life
 - v. Reduced fuel consumption and a net savings of over 500,000 gallons per year.
 - vi. Reduced pollution in the city and reduced GHG emissions
 - vii. Transport system and industry is better planned and controlled
 - viii. Improved urban planning and improved land use in the city

5. Expected Goal, Objectives and Outcomes of Final Project and Relevance to Outcomes of CPD and UNDAF

Objectives

43. The development objective of the project is to reduce GHG emissions by promoting the transformation and planning process for an environmentally sustainable transport program in the

City of Managua. Supporting the Managua Municipality's ongoing efforts in reforming the city's transportation network will do this. Specific areas of focus will be:

- Assistance in the development of a legal, institutional and technical framework for a public transport system
- Contribute to physical planning and the development of planning tools for territorial management and land use in Managua municipality
- Creation and strengthening of capacities within the Managua Municipality and other institutions, for the control and monitoring of GHG emissions from the transport system and the vehicle sources in general
- Assistance in the development of a bicycle path, which is to be integrated with the existing Public Transport System (PTS).

6. Description of Preparatory Inception Stage

6.1 Expected Outcomes and Completion Date of PDF A project

44. The project will ensure that the current transformation of the public transport system in Managua results in a reduction of GHG emissions and is environmentally sustainable. It will assist in the design of an integrated transport program for the city that takes into account global environmental considerations, in order to develop an efficient and modern public transportation system, maximize the potential of non motorized transport (bicycles) and enhance local capacities to ensure the long term sustainability and the commercial viability of the environmentally friendly transport system.

45. Specific project outcomes will be:

1. Assistance in the development of a legal, institutional and technical framework for a public transport system.

1.1 The planning process will be supported, to develop a sustainable, efficient and environmentally friendly public transportation system that takes into account global environmental issues, including the development of an institutional figure dedicated to the management, planning and control of public transport.

1.2 The project will assist in the identification of integration options for the current transport system and the future Busway and bicycle path. An integrated design of bus routes will be developed to enhance the system's efficiency. Technical standards incorporating low emission requirements will be developed and enforced for all public transport operations. The project will also assist in the design of a funding mechanism for a more efficient public transportation system.

2. Physical planning and the development of planning tools for territorial management and land use in Managua municipality

2.1 The Integral Transport Plan would be revised and updated, taking into account vulnerability and environmental impact assessment of all the components of the plan. Specific attention will be given to the development of a specific environmental impact assessment of the Busway

projected routes and design. Also, special attention will be given to the design and implementation of the cycle routes.

3 Creation and strengthening of capacities within the Managua Municipality and other institutions, for the control and monitoring of GHG emissions from the transport system and the vehicle sources in general

3.1 To achieve the development objective of the project, it is necessary to develop and strengthen capacities within the Municipality, as well as in MARENA and the universities, to carry out research, monitoring and updating of information on air pollution and control standards. Periodic monitoring should be carried out to assess reductions in GHG emissions from the transport sector.

4. An urban bicycle path system will be developed and put in place.

4.1 Based on the results of the planning process in outcome 1, the City of Managua will begin the construction of an urban bicycle path network that will provide commuters with a safe and rapid alternative to public and private motorized transport. This network will be integrated with green open spaces and recreational land uses in the city, thus contributing to a more integrated and friendly urban environment.

6.2 Activities to be financed by the PDF A:

1. Formulation of concept paper / PDF B

46. A consultant will be hired by UNDP to develop and consult *concept paper / PDF B*. During the formulation process, strong coordination will be needed with the Municipality of Managua, and other stakeholders involved.

2. Development of national workshops and meetings for consultation with stakeholders

47. An integrated work plan will be developed with broad participation of local private and public partners (including other donor agencies) through facilitated workshops, to promote coordination and involvement in project activities.

6.3 Total Cost of PDF A (including co-financing amounts and sources)

40. The total cost of the PDF A is US \$30,000, of which \$25,000 is requested from GEF and \$5,000 is in-kind co-financing from the Municipality of Managua.

Timeframe:

Activity	TIME	GEF FINANCING
Formulation of concept paper / PDF B	3 months	\$15,000
Development of national workshops and meetings for consultation with stakeholders	3 months	\$ 5,000
Other costs (travel, translation of document)		\$ 5,000
Total	3 months	\$25,000

7. Total budget and workplan:

Transportation in Managua

Project ID:

Project Title: PIMS 3518 CC PDF A: Nicaragua: Promotion of Environmentally Sustainable Transport for the capital city of Managua, Nicaragua

GEF Outcome/Atlas Activity	Responsible Party	Source of Funds	ERP/ATLAS Budget Description		Amount 2005 (US\$)	Total (US\$)
Outcome Concept paper / PDF B successfully formulated. National workshops and meetings for consultation with stakeholders developed.	Municipality of Managua	GEF	71300	International Consultants	15,000	15,000
	Municipality of Managua	GEF	71600	Travel	5,000	5,000
	Municipality of Managua	GEF	71200	National consultants	4,250	4,250
	Municipality of Managua	GEF	74500	Miscellaneous	750	750
GRAND TOTAL					25,000	25,000

8. Co-Financing:

48. For this PDF-A, the Municipality of Managua will give an in-kind support of 5,000 USD.

49. There will be an institutional agreement of collaboration to be signed between the Project and the institutions involved in public transport (Municipality of Managua, IRTRAMMA, UNDP, Presidency), which will in turn strengthen and formalize new strategic alliances between the stakeholders for the process of preparation and implementation of the new system.

50. A preparatory stage Project is in the process of being approved for implementation, and this will be with funds from UNDP and IDB. The project is called "Transformation of the Public Transport in Managua" – Phase I – Preparation of conditions. This project has as its main objectives, the

preparation of conditions for the implementation of the transformation of the public transport system in Managua, as well as the procurement of financial resources for the implementation phase.

51. The main activities in this stage include:

- Conformation of the team of the project.
- Definition of the entity to be responsible for the implementation of the system. It is proposed that it might be: a) through IRTRAMMA, or b) through the creation of a mixed public-private enterprise
- Financial resources for the implementation stage.
- Visits to other innovative public transport systems in other countries
- Formulation of Terms of Reference for the design and infrastructure of the system
- Legal adjustments of the General Law of Transport, as well as legal modifications to IRTRAMMA, or alternatively, the legal creation of the new enterprise to take over the implementation of the new system.

52. The project, which has an implementation period of 10 months, will be implemented with a US \$300,000 financing from IDB, and US \$100,000.00 from UNDP from TRAC funds. UNDP will follow up the coordination and orientation of the project, in order to contribute to the maximum reach and impact of its results. Also UNDP will have an administrative role, being responsible for financial management of the project according to UNDP regulations.

53. There will be an institutional agreement of collaboration to be signed between the Project and the institutions involved in public transport (Municipality of Managua, IRTRAMMA, UNDP, Presidency), which will in turn strengthen and formalize new strategic alliances between the stakeholders for the process of preparation and implementation of the new system.

9. Management Arrangements

54. The Government of Nicaragua will execute the Project under the UNDP National Execution (NEX) mode. In its capacity as executing agency, Managua's Municipality will be responsible for directing the project, meeting the immediate objectives and projected outputs, making effective and efficient use of the resources allocated in accordance with this Project Document, and ensuring effective coordination between the Project and the other existing projects in the country. This will imply coordination with other donors participating in this effort as well as other government institutions such as MARENA.

10. Mandatory Annexes

- a. Annex 1: TOR for key staff
- b. Annex 2: Government GEF Operational Focal Point Endorsement Letter
- c. Annex 3: Projects profile (in Spanish)

Annex 1

TERMS OF REFERENCE INTERNATIONAL ADVISOR

55. The development objective of the project *Promotion of Environmentally Sustainable Transport for the capital city of Managua, Nicaragua* is to reduce GHG emissions by promoting the transformation and planning process for an environmentally sustainable transport program in the City of Managua. Supporting the Managua Municipality's ongoing efforts in reforming the city's transportation network will do this. Specific areas of focus will be:
56. Assistance in the development of a legal, institutional and technical framework for a public transport system
57. Contribute to physical planning and the development of planning tools for territorial management and land use in Managua municipality
58. Creation and strengthening of capacities within the Managua Municipality and other institutions, for the control and monitoring of GHG emissions from the transport system and the vehicle sources in general
59. Assistance in the development of a bicycle path, which is to be integrated with the existing Public Transport System.
60. The project will ensure that the current transformation of the public transport system in Managua results in a reduction of GHG emissions and is environmentally sustainable. It will assist in the design of an integrated transport program for the city that takes into account global environmental considerations, in order to develop an efficient and modern public transportation system, maximize the potential of non motorized transport (bicycles) and enhance local capacities to ensure the long term sustainability and the commercial viability of the environmentally friendly transport system.
61. The United Nations Framework Convention on Climate Change (UNFCCC) seeks to stabilize atmospheric greenhouse gas concentrations at levels that would prevent dangerous anthropogenic interference with global climate. At its first meeting, the Conference of the Parties (CoP) of the UNFCCC asked the GEF, then the interim operating entity of the financial mechanism, to adopt a mixed strategy wherein projects will be selected with a double set of program priorities as described in paragraph 9(c) of the GEF report, that is, if they meet either one of the long-term program priorities or one of the short-term program priorities.
62. Building upon the City of Managua's priorities, the GEF project will provide financing for initiatives that ensure that the city's transportation program considers global environmental issues and long-term environmental sustainability. The Municipality's commitment to addressing Managua's transport problems will result in substantial on the ground investment, policy reforms, and institutional restructuring.

63. UNDP requires the participation of an international expert with knowledge of projects of climate change, and specifically of public transport system transformation. This project has been addressed and is being coordinated in its formulation stage by UNDP.

Obligations and Activities:

64. The consultant, an expert in formulation of projects in environmental engineering, climate change and transport systems, will be responsible to carry out the activities below mentioned, and to assist the UNDP offices in Nicaragua, through the Environment and Energy Unit, for the formulation of Concept/PDF B of the project “*Promotion of Environmentally Sustainable Transport for the capital city of Managua, Nicaragua.*”

The activities are:

65. To assist the Environment and Energy Unit of UNDP in the preparation of the concept paper/PDF B.
66. To coordinate and facilitate meetings and workshops for consultation among the different stakeholders and co financing agencies of the project, incorporating key aspects of those meetings into the concept paper/PDF B.
67. To assist in the identification of other sources of co financing both at the national and international level for the implementation of the project.

Workplan

68. The mentioned activities, or new ones discussed and considered important for the project, will be developed either at the consultant's office or in Nicaragua.

Supervision

69. The consultant will report directly to the Coordinator of the Environment and Energy Unit of UNDP

Payments:

70. In consideration of the correct development of activities and fulfillment of products agreed, UNDP will pay the consultant the sum of US dollar. Also, any costs of travel (air tickets, etc) and operational costs will be reimbursed, all according to UNDP regulations.

Qualifications and Professional Experience

71. A M.Sc. or equivalent grade in Environmental Engineering, or related fields.
72. At least 10 years of experience in the formulation and implementation of activities and projects of natural resources and climate change.
73. Knowledge and experience of topics of GEF on the focal area of climate change, GHG emission reductions, sustainable public transport systems and operational programs of GEF
74. Computer abilities, management of Microsoft Office
75. Perfect domain of Spanish and English, both oral and written

Annex 2: Nicaragua Letter of Endorsement

(See document in a separate file)

Annex 3 Projects profile (in Spanish)

Transformación del transporte público de Managua - “Busway”

Situación Actual y antecedentes

La ciudad de Managua presenta importantes problemas estructurales y operativos en su sistema de transporte público lo que ha causado una deficiente calidad del servicio, una alta accidentalidad y bajos niveles de calidad de vida entre otros. El servicio de transporte público actual es anárquico, caracterizado por la falta de control para la prestación del servicio y la falta de capacidad empresarial para contar con un sistema estructurado y organizado. Gran parte de las causas de esta condición del transporte está en la falta de recursos técnicos y económicos para ejercer adecuadamente la planeación, regulación y control del transporte por parte de las autoridades Municipales. Adicionalmente existe una debilidad importante en las empresas prestadoras del servicio, las cuales se han desarrollado bajo conceptos de informalidad, sin una estructura organizacional sólida y sin la capacidad de generar capital para realizar inversiones y mejorar el servicio.

Es por esta razón que desde 1998, se han venido realizando diversos estudios tendientes a desarrollar una alternativa de solución a los problemas que aquejan el sector. En este sentido se identifican 2 estudios principalmente:

- El *"Plan Integral de transporte y Viabilidad Del Municipio de Managua. Informe Final"* desarrollado por la Agencia Internacional de Cooperación Japonesa, JICA, en marzo de 1999.
- El *"Estudio de Factibilidad del Sistema Tranvía Municipal ó Busway de Managua"* desarrollado por EPYPSA-CORASCO en julio de 2001, financiado por el BID.

Paralelamente con el desarrollo de estos estudios, las autoridades municipales en cabeza del IRTRAMMA, han desarrollado actividades de campo y estudios complementarios tendientes a diagnosticar las condiciones reales y estructura actual de la industria del transporte de Managua:

- *Estadísticas básicas del parque Automotor de Servicio Público en el Municipio de Managua.* Abril 2002
- *Conteo de pasajeros en rutas del transporte urbano colectivo.* Enero 2002
- *Costo de Operación y Tarifa TUC.* Octubre 2004

Como resultado de los estudios mencionados anteriormente se concluye la necesidad de implantar un nuevo sistema de buses mediante la operación de una red estructurada de corredores troncales y una red complementaria de rutas alimentadoras.

El PNUD, a través de la firma consultora AKIRIS de Colombia, ha desarrollado un plan de acción para la implementación de la definición y diseños para un primer corredor troncal en el denominada Pista Norte propuesta en el Estudio de Factibilidad preparado por EPYPSA-CORASCO.

Solución propuesta

El Sistema propuesto para la ciudad de Managua está basado en la necesidad de implementar una solución que ofrezca un nivel de servicio acorde con las necesidades de la población, que sea auto sostenible en el tiempo y que genere beneficios para la ciudad que se reflejen en una mejor calidad de

vida y una mayor competitividad en el entorno regional. Para lograr un mejor entendimiento, la solución propuesta se ha dividido en sus 5 aspectos claves:

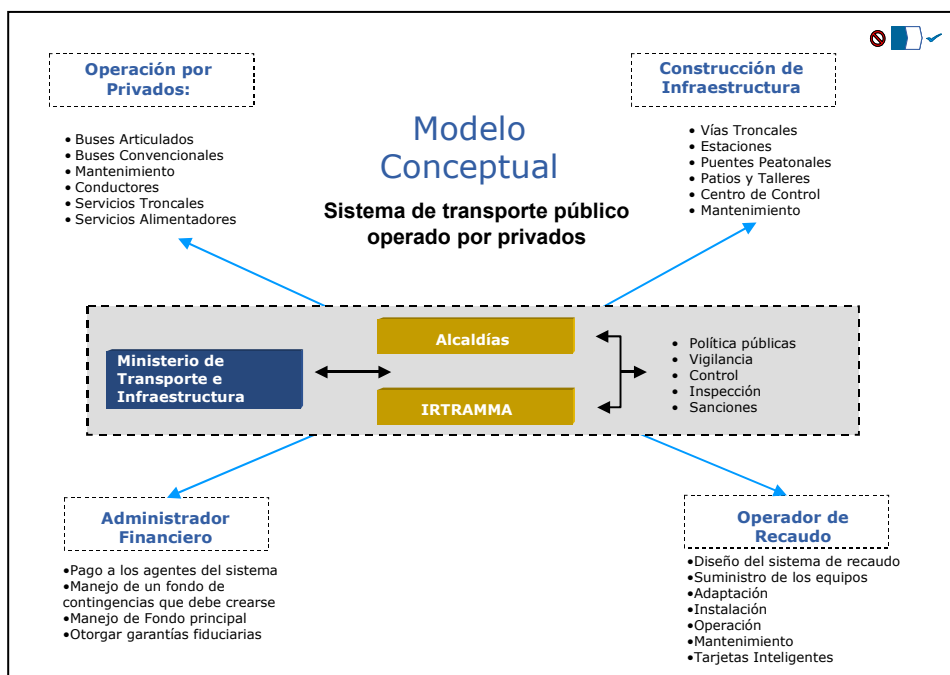
1. Estructura Institucional

Como solución a esta situación se propone la implementación de un cambio estructural, basado en la asignación clara y concreta de responsabilidades entre agentes públicos y privados, generando mecanismos fuertes y estables para la vinculación entre las partes. Este cambio implica necesariamente la transformación institucional del transporte público en la ciudad de Managua.

La estructura institucional propuesta se fundamenta en la implementación de 5 elementos claves :

1. Generación de un ente específico para la gestión, planeación y control del transporte público, dotada de un equipo humano y técnico especializado en la gestión y control del sistema de transporte
2. Vinculación de operadores privados de transporte para la operación troncal y alimentadora del sistema
3. Participación de un operador privado mediante Contratos de Concesión para la construcción de la infraestructura
4. Contratación de un administrador Financiero para la definición de un esquema de estímulos y multas que motiven la eficiencia y la calidad del servicio
5. Vinculación de un operador privado para el recaudo de los recursos

A continuación se ilustra el nuevo esquema propuesto:

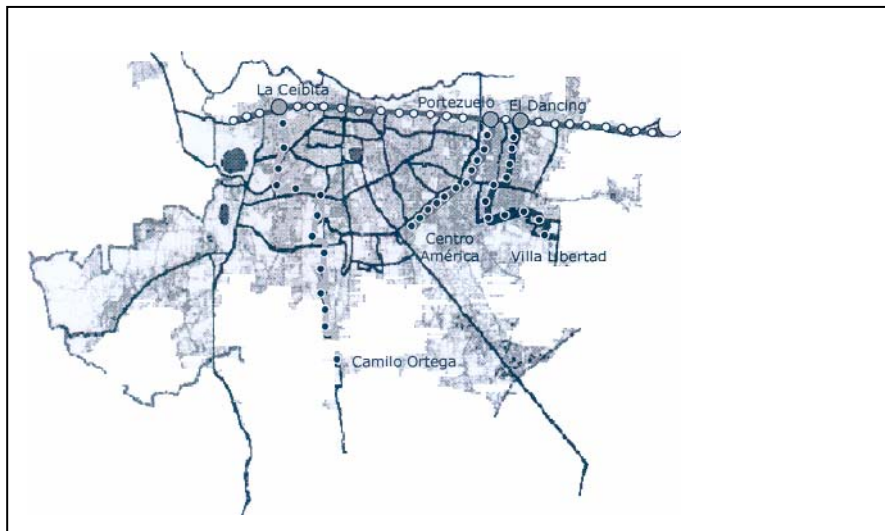


2. Estructura operativa

Desde el punto de vista operativo, se propone un nuevo modelo basado en la dedicación de infraestructura exclusiva para el transporte público, mediante la construcción de corredores troncales y

la integración con rutas alimentadoras, la construcción de paradas fijas para el cobro del pasaje, y acceso a nivel a los vehículos. El nuevo sistema será operado utilizando vehículos de alta capacidad, diseñados para el transporte de pasajeros, con los más altos sistemas de seguridad y bajo impacto ambiental.

Específicamente se propone la implantación del nuevo modelo operativo en un primer corredor troncal por la Pista Norte, el cual cuenta con 25 paradas y 3 rutas alimentadoras como se ilustra a continuación:



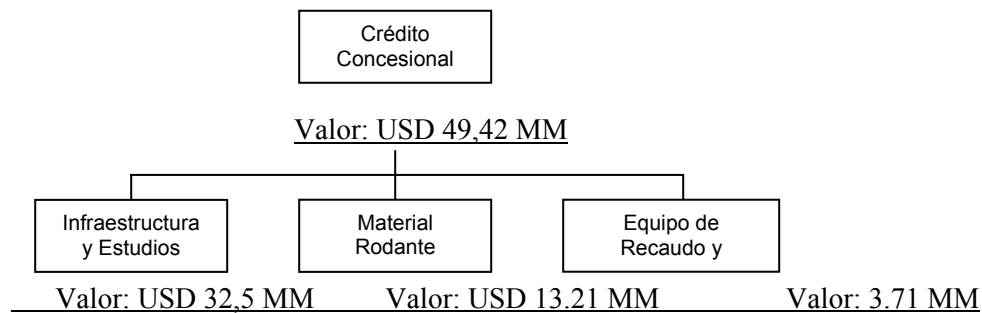
El modelo operativo contempla 7 componentes fundamentales:

1. Corredores exclusivos
2. Paradas sencillas
3. Rutas troncales y alimentadoras
4. Paradas de integración
5. Sistema de recaudo
6. Sistema de programación y control
7. Equipo rodante

3. Estructura económica

La viabilidad y el modelo económica requiere de una suscripción de un Crédito Madre para la financiación de la totalidad de las inversiones del sistema. El Gobierno de Nicaragua suscribirá un crédito concesional de un monto total de USD 49,4 MM con una entidad multilateral. Este crédito concesional se tomaría bajo las condiciones especiales establecidas para el Gobierno de Nicaragua, es decir un crédito a 40 años con 10 años de gracia pagando intereses anuales del 1% y los 30 años restantes abonando a capital y con una tasa de interés del 2% anual sobre el saldo.

Este crédito estaría dividido de la siguiente manera para garantizar el financiamiento de las inversiones requeridas para el proyecto:



La siguiente tabla muestra como esta dividido el rubro de inversión total, incluyendo la estructura de cada uno de los montos, plazo, tasa de interés, la forma de pago, y la fuente que realizara el desembolso correspondiente a cada monto.

Inversión	Estructura	Forma de pago	Fuente
Estudios y diseños preliminares	Monto: USD 1,2MM Plazo: 40 años Tasa: 1% y 2%	Pago anual del Gobierno y aporte del Sistema	Presupuesto nacional Tarifa al usuario
Administración y Promoción	Monto: USD1,6MM Plazo: 40 años Tasa: 1% y 2%	Pago anual del Gobierno y aporte del Sistema	Presupuesto nacional Tarifa al usuario
Infraestructura	Monto: USD 28,8 MM Plazo: 40 años Tasa: 1% y 2%	Pago anual del Gobierno y aporte del Sistema	Presupuesto nacional Tarifa al usuario
Equipos de transporte	Monto: USD 13,21 MM Plazo: 12 años Tasa: 1% y 2%	Pago anual de los transportadores de USD 1,33MM	Tarifa al usuario
Equipos de recaudo y control	Monto: USD 3,71 MM Plazo: 8 años Tasa: 3%	Paga anual del Recaudador de USD 0,53MM	Tarifa al usuario

La adquisición de equipos tanto para los operadores de Transporte como para el recaudo serán financiados utilizando el denominado Crédito Madre, sin embargo, estos operadores pagaran esa financiación a una tasa anual del 3% durante el tiempo de la concesión, es decir durante 12 y 8 años respectivamente.

Con este esquema de financiación para el proyecto, el Sistema tendrá los ingresos suficientes para pagar el crédito suscrito con la entidad multilateral y para reinvertir en equipo rodante y en equipos de recaudo¹. Además, bajo el esquema propuesto, el Gobierno Nicaragüense aportara USD 9,97 MM para el pago de la financiación total del Sistema en un horizonte de 40 años. Adicionalmente, con esta propuesta de pago el sistema generara hasta USD 20 MM de flujo acumulado positivo en los primeros años los cuales estarán disponibles para inversión y manejo de tesorería según se decida en su momento.

¹ Ver explicación detallada en el Informe Final y en Anexo 2. “Modelo Económico y Financiero” de la consultoría PNUD-AKIRIS.

Reconociendo que el usuario del transporte público de Managua es altamente sensible a la tarifa, por eso se ha realizado los cálculos del modelo económico con una tarifa meta de C\$3.

4. Fundamento legal

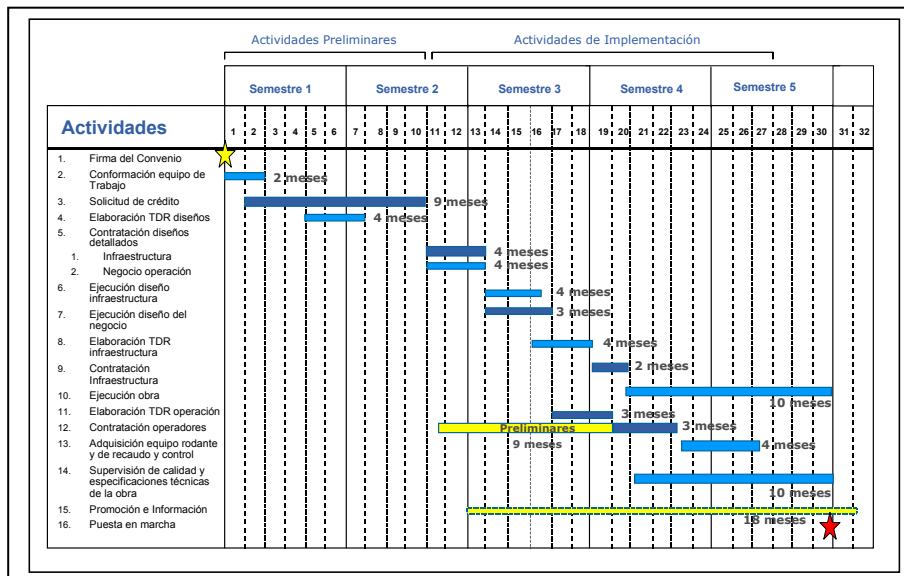
De acuerdo a la solución propuesta y al esquema de participación pública y privada en la operación, administración y control del Sistema, es necesario tener en cuenta el Marco Legal que da soporte y que garantiza su óptimo funcionamiento.

5. Plan de acción

El Plan de acción identifica las actividades requeridas para desarrollar los procesos previos al inicio del funcionamiento del nuevo sistema a fin de lograr la implantación y el correcto funcionamiento del Sistema con la calidad requerida y en el menor tiempo posible.

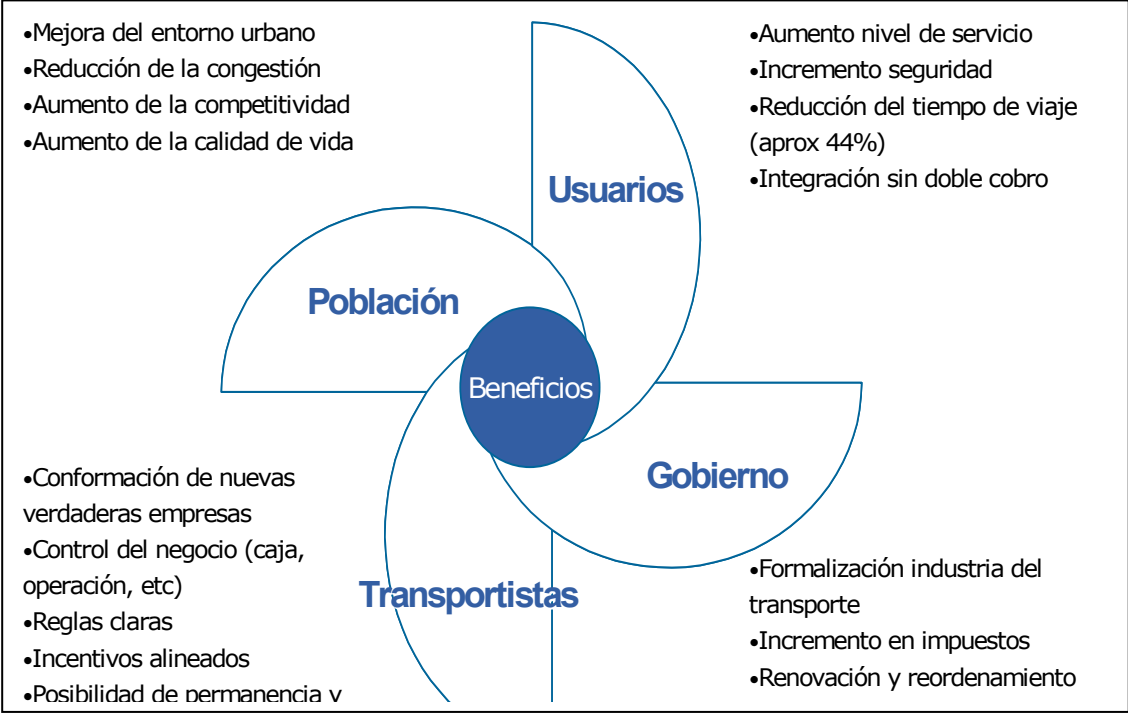


Para este Plan de Acción se ha diseñado un cronograma que permita poner en funcionamiento el nuevo sistema en un plazo no mayor a 30 meses. Este cronograma establece la duración de las principales actividades requeridas para la implementación y permitirá el seguimiento de las actividades propuestas y la ejecución efectiva del plan.



Con la implementación del nuevo Sistema se prevé un impacto beneficioso para la ciudad de Managua generaría y todas las partes.

Favor notar que la disminución de consumo de combustible es de 500,000 gal/año



SIGNATURE PAGE

Country: Nicaragua

UNDAF Outcome(s)/Indicator(s):

Outcome 21, Strengthening of decentralization of the environmental management.

Outcome 1, Sustainable management of environment and natural resource incorporated into poverty reduction strategies/key national development frameworks and sector strategies.

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s):

(CP outcomes linked to the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s):

(CP outcomes linked to the SRF/MYFF goal and service line)

Implementing partner:

UNDP Nicaragua

(Designated institution/Executing agency)

Other Partners:

(Formerly implementing agencies)

Programme: Period: April-August 2005
Programme Component: Modal Shifts in Urban transport and clean vehicle/fuel technologies
Project Title: Promotion of Environmentally Sustainable Transport for the capital city of Managua, Nicaragua
Project ID: _____
Project Duration: Four months
Management Arrangement: NEX

Budget	<u>30,000</u>
Allocated resources:	<u>25,000 (GEF)</u>
• Government	<u>5,000</u>
• Regular	_____
• Other:	
○ Donor	_____
○ Donor	_____
○ Donor	_____
• In kind contributions	<u>5,000</u>

Agreed by (Government): _____

Agreed by (Implementing partner/Executing agency): _____

Agreed by (UNDP): _____